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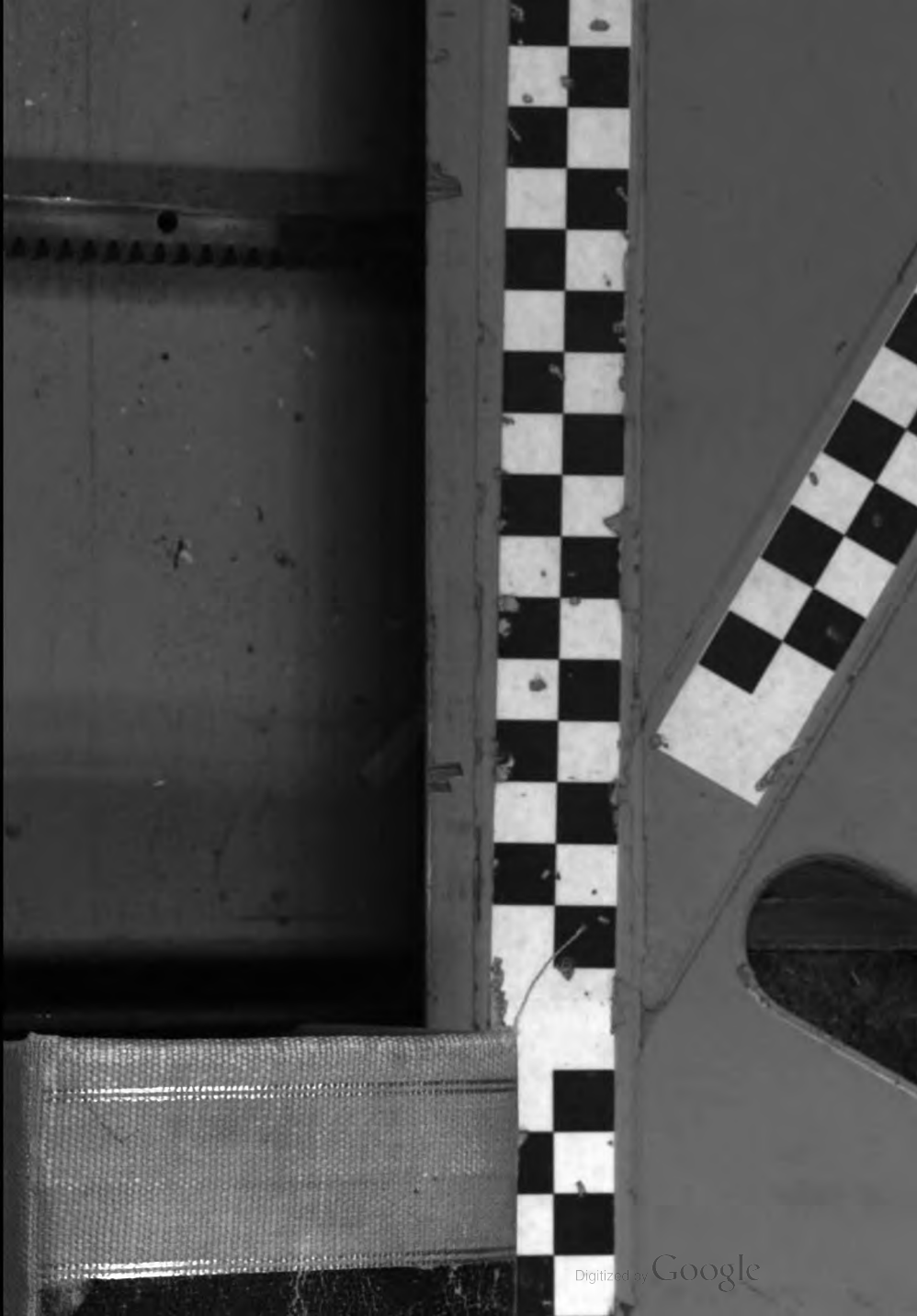
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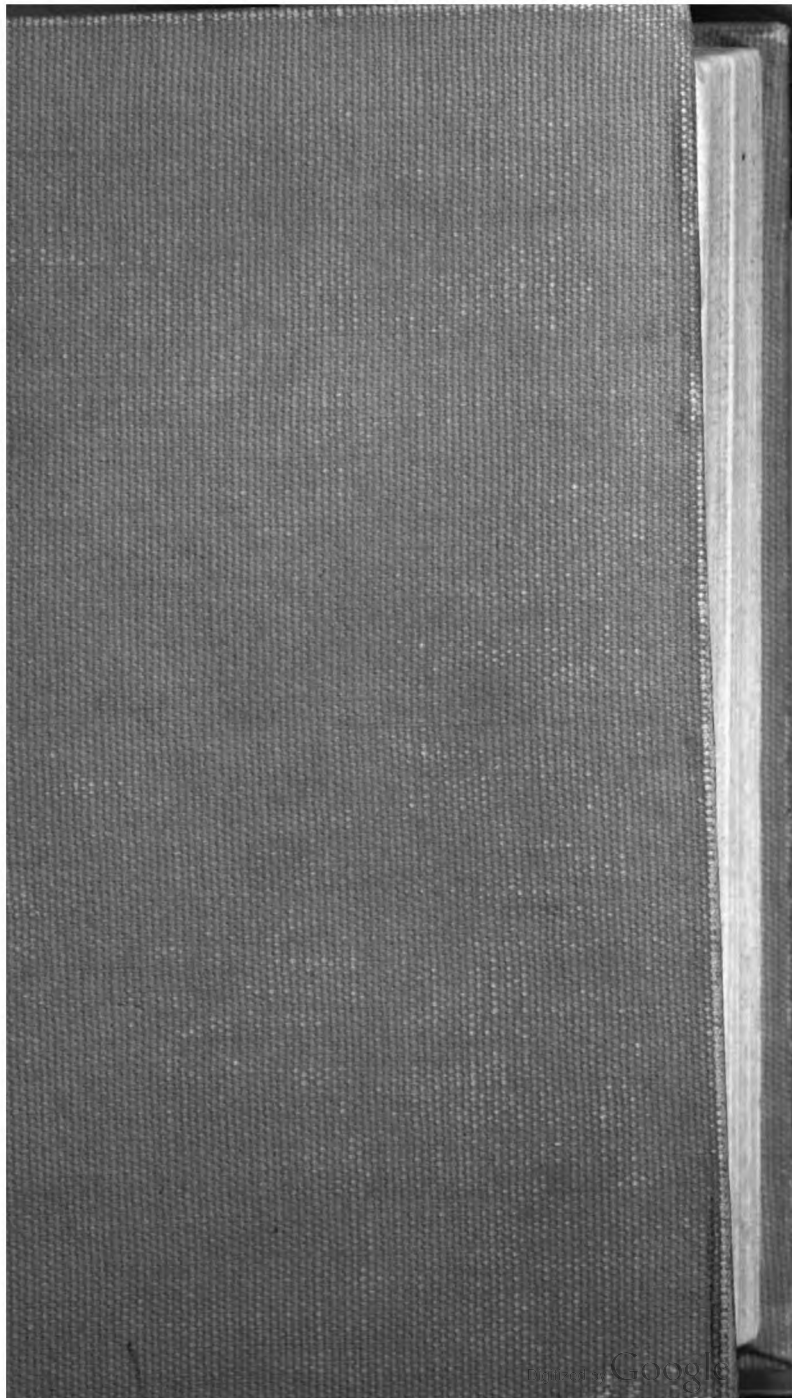


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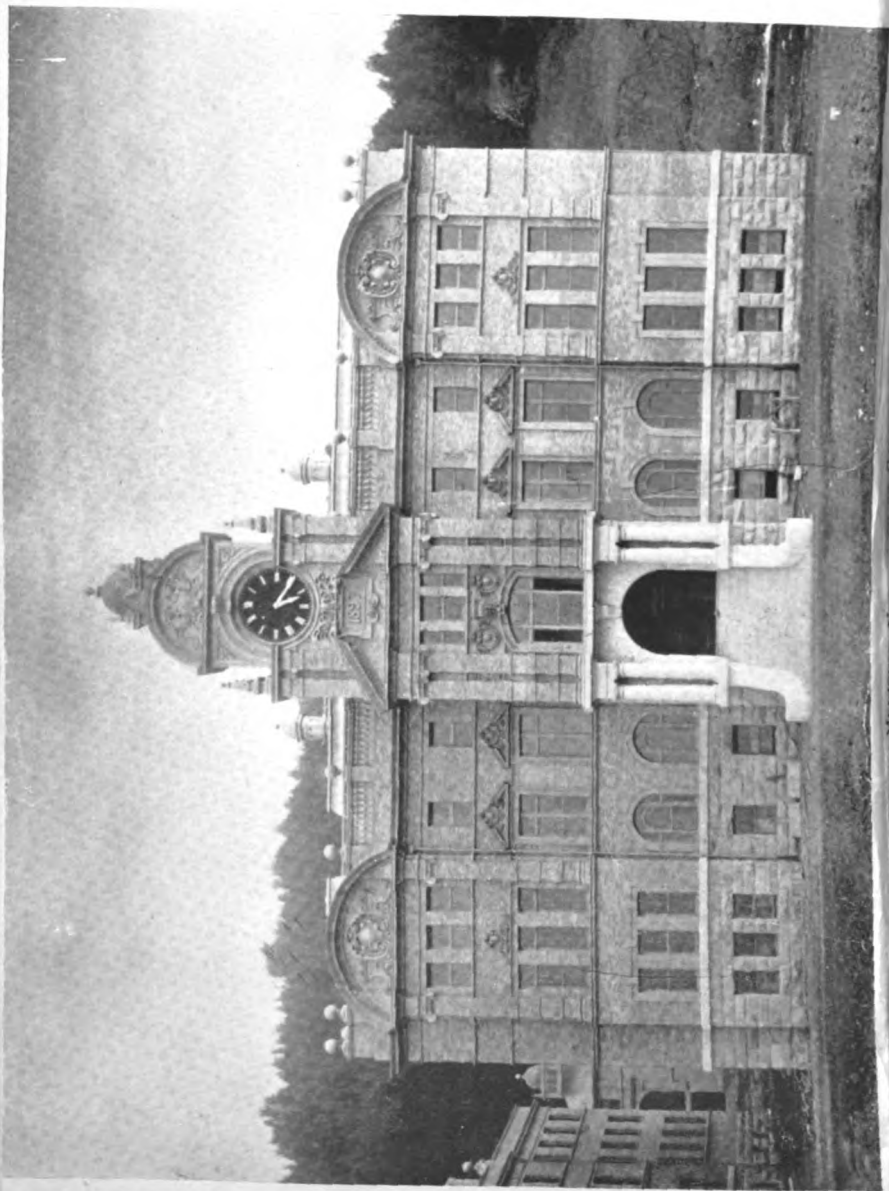


OFFICE OF THE DEAN  
UNIVERSITY OF CALIFORNIA  
MEDICAL SCHOOL









**MEDICAL DEPARTMENT**

# **University of California**

**THIRTY-SEVENTH ANNUAL ANNOUNCEMENT**

**WITH**

**CATALOGUE OF STUDENTS AND GRADUATES**

**AND REPORTS OF HOSPITAL AND DISPENSARY CLINICS**

**1899-1900**

## CALENDAR FOR 1899-1900

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THE TERM will open on Friday, September 1, 1899, and close on Monday, April 30, 1900.

THE MATRICULATION EXAMINATIONS will be held at Berkeley, August 14, 15, 16.

APPLICANTS are not admitted as regular students after September 30.

THE EXAMINATIONS for promotion and the final examinations for graduation will begin Monday, April 23.

THE LABORATORY and LECTURE COURSES are given at the Affiliated Colleges Buildings south of the east end of Golden Gate Park.

THE CLINICAL LECTURES are delivered at the City and County Hospital, Twenty-second street and Potrero avenue.

THE DISPENSARY CLINICS are held at 155 New Montgomery street.

THE ANNUAL COMMENCEMENT for conferring the Degree of Doctor of Medicine will be held in May.

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All communications should be addressed to

DR. A. A. D'ANCONA, Dean of the Faculty,

1022 Sutter St., San Francisco, California.

# UNIVERSITY OF CALIFORNIA

## BOARD OF REGENTS

### Ex-Officio Regents.

HIS EXCELLENCY HENRY T. GAGE.....	SACRAMENTO
<i>Governor, ex-officio President of the Board.</i>	
HIS HONOR JACOB H. NEFF.....	AUBURN
<i>Lieutenant-Governor.</i>	
HON. ALDEN ANDERSON.....	SUISUN
<i>Speaker of the Assembly.</i>	
HON. THOS. J. KIRK.....	SACRAMENTO
<i>State Superintendent of Public Instruction.</i>	
HON. ADOLPH SPRECKELS.....	SAN FRANCISCO
<i>President of the State Agricultural Society.</i>	
E. A. DENICKE, ESQ.....	SAN FRANCISCO
<i>President of the Mechanics' Institute.</i>	
BENJAMIN IDE WHEELER, Ph. D.....	BERKELEY
<i>President of the University.</i>	

### Appointed Regents.

The names are arranged in order of original accession to the Board.

NAME	ADDRESS	*TERM EXPIRES
ANDREW S. HALLIDIE, ESQ.,	330 Market St., San Francisco,	- 1908
HON. WILLIAM T. WALLACE,	799 Van Ness Ave., San Francisco,	1902
ISAIAH WM. HELLMAN, ESQ.,	Nevada Bank, San Francisco,	- 1902
ARTHUR RODGERS, B. S., LL. B.,	309 Montgomery St., S. F.,	- 1906
ALBERT MILLER, ESQ.,	cor. Annie & Stevenson Sts., S. F.,	1906
JAMES F. HOUGHTON, C. E.,	223 Mission St., San Francisco,	- 1904
CHESTER ROWELL, M. D.,	Fresno, - - - - -	1910
JAMES A. WAYMIRE, ESQ.,	Alameda, - - - - -	1908
HON. HENRY S. FOOTE,	206 Kearny St., San Francisco,	- 1900
HON. C. W. SLACK, Ph. B., LL. B.,	309 Montgomery St., S. F.,	- 1910
JACOB BERT REINSTEIN, A. M.,	217 Sansome St., San Francisco,	1912
JOHN E. BUDD, A. B.,	Stockton, - - - - -	1900
MRS. PHEBE A. HEARST,	Mills Building, San Francisco,	- 1904
HON. STEPHEN M. WHITE,	Los Angeles, - - - - -	1914
GEORGE C. PARDEE, Ph.B., M.D.,	672 11th St., Oakland,	- 1914
HON. W. H. L. BARNES,	Crocker Building, San Francisco,	1912

\* Terms of Regents expire March 1.

Regular meetings of the Board of Regents are held thirteen times a year, viz: In San Francisco on the second Tuesday in each month; in Berkeley, on the day preceding Commencement in the College of Letters and the Colleges of Science.

## UNIVERSITY OF CALIFORNIA

## MEDICAL DEPARTMENT

## FACULTY

- BENJAMIN IDE WHEELER, Ph. D., President of the University, *ex officio* President of the Faculty.
- G. A. SHURTLEFF, M. D., Emeritus Professor of Mental Diseases and Medical Jurisprudence.
- R. BEVERLY COLE, A. M., M. D., M. R. C. S. Eng., Professor of Obstetrics and Gynecology; President of Faculty.
- ROBERT A. MCLEAN, M. D., Professor of Clinical and Operative Surgery.
- BENJ. R. SWAN, M. D., Professor of Diseases of Children.
- GEORGE H. POWERS, A. M., M. D., Professor of Ophthalmology and Otology.
- WM. WATT KERR, A. M., M. B., C. M., Professor of Clinical Medicine.
- ARNOLD A. D'ANCONA, A. B., M. D., Professor of Physiology; Dean.
- DOUGLASS W. MONTGOMERY, M. D., Professor of Diseases of the Skin; Curator.
- WASHINGTON DODGE, M. D., Professor of Therapeutics.
- JOHN M. WILLIAMSON, M. D., Professor of Anatomy and Lecturer on the Principles and Practice of Surgery.
- JOHN W. ROBERTSON, A. B., M. D., Professor of Nervous and Mental Diseases.
- JOHN C. SPENCER, A. B., M. D., Professor of Pathology and Histology.
- HARRY M. SHERMAN, M. D., Clinical Professor of Orthopedic Surgery.
- WM. E. HOPKINS, M. D., Associate Professor of Ophthalmology and Otology.
- GEO. F. SHIELDS, M. D., F. R. C. S. E., etc., Associate Professor of the Principles and Practice of Surgery. (Absent on leave.)
- CHAS. A. VON HOFFMANN, M. D., Associate Professor of Gynecology.
- WM. B. LEWITT, M. D., Associate Professor of Diseases of Children.
- FRANK T. GREEN, Ph. G., Associate Professor of Materia Medica and Medical Chemistry.
- THOMAS W. HUNTINGTON, A. B., M. D., Associate Professor of Clinical Surgery.
- HERBERT C. MOFFITT, B. S., M. D., Lecturer on the Principles and Practice of Medicine and Instructor in Clinical Medicine.
- J. HENRY BARBAT, Ph. G., M. D., Instructor in Anatomy.
- WILLIAM J. HAWKINS, M. D., Instructor in Physiology.
- RICHARD M. H. BERNDT, M. D., Instructor in Therapeutics.
- THOS. B. W. LELAND, M. D., Instructor in Physiology.
- PHILIP MILLS JONES, M. D., Instructor in Electro Therapeutics.
- JAMES F. McCONE, B. S., M. D., M. R. C. S. Eng., Instructor in Obstetrics.
- HUGH LAGAN, M. D., Assistant in Clinical Surgery.
- CHARLES L. MORGAN, A. B., Ph. G., M. D., Instructor in Materia Medica.
- EDWARD VON ADELUNG, JR., B. S., M. D., Instructor in Nervous Diseases.

WALLACE I. TERRY, M. D., Assistant in Clinical Surgery.  
 ROBERT T. LEGGE, Ph. G., M. D., Assistant in Materia Medica.  
 HERBERT A. L. RYFKOGEL, M. D., Instructor in Bacteriology, Director of the  
 Clinical Laboratory and Assistant Curator.

**SPECIAL LECTURERS**

JOSEPH LE CONTE, A. M., M. D., LL. D., Professor of Natural History, University of California.  
 WILLIAM E. RITTER, Ph. D., Associate Professor of Biology, University of California.  
 HERBERT P. JOHNSON, Ph. D., Assistant Professor of Zoology, University of California.

**OUT-PATIENT DEPARTMENT**

*Medicine—*  
 Chief of Clinic:  
 J. MORA MOSS, M. D.  
 Assistant:  
 FRANK R. DRAY, M. D.  
 Chief of Clinic:  
 DANIEL E. F. EASTON, M. D. —  
 Assistant:  
 SANFORD BLUM, M. D.  
*Surgery—*  
 PROF. JOHN M. WILLIAMSON, M. D.  
 Chief of Clinic:  
 \* HENRY B. A. KUGELER, M. D.  
 Assistants:  
 MARSHALL B. RYER, M. D.  
 JAMES P. DUNN, M. D.  
 HAROLD BRUNN, M. D.

*Genito-Urinary Clinic—*  
 PROF. JOHN M. WILLIAMSON, M. D. —  
 Assistant:  
 CECIL M. ARMISTEAD, M. D.

PROF. JOHN C. SPENCER, M. D.  
*Eye and Ear Clinic—*  
 PROF. GEO. H. POWERS, A. M., M. D. —  
 Chief of Clinic:  
 GEORGE W. MERRITT, M. D.  
 Assistants:  
 HUGH LAGAN, M. D.  
 ROBERT H. ORR, M. D.  
 GRACE FEDER, M. D.  
 Clerk of Clinic:  
 ADELINA M. FEDER, M. D.

\* Absent on Leave.



*Nose and Throat Clinic—*

PROF. GEO. H. POWERS, A. M., M. D.

## Assistants:

F. B. EATON, M. D.

GARDNER P. POND, M. D.

*Gynecology—*

ASSOC. PROF. CHAS. A. VON HOFFMANN, M. D.

## Chief of Clinic:

JAMES F. MCCONE, M. D., M. R. C. S. Eng. —

## Assistant:

MARSHALL B. RYER, M. D. —

*Cutaneous and Venereal Diseases—*

PROF. DOUGLASS W. MONTGOMERY, M. D.

## Assistants:

ALFRED B. GROSSE, M. D.

ERNEST PRING, M. D.

*Orthopedic Surgery—*

PROF. HARRY M. SHERMAN, A. M., M. D. —

## Chiefs of Clinics:

SAMUEL J. HUNKIN, M. D.

\* HENRY DU R. PHELAN, M. D.

## Assistants:

JOHN J. FLOOD, M. D.

ELEANOR M. STOW, M. D.

*Nervous Diseases—*

## Assistant:

EDW. VON ADELUNG, JR., B. S., M. D. —

*Diseases of Children—*

## Chief of Clinic:

P. WILLIAM NATHAN, M. D.

*Clinical Laboratory—* H. A. L. RYFKOGEL, M. D., Director.

\* Absent on Leave.

## THIRTY-SEVENTH ANNUAL COURSE OF INSTRUCTION

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### SESSION OF 1899-1900

The Medical Department of the University of California was organized in 1872, as an integral part of the State's educational center.

The curriculum may be summarized as follows:

**Four Annual Courses.**—Attendance upon four courses, of eight months each, attended through four separate years, is required before the student can present himself for graduation. Students are required to attend the hospital and out-patient clinics regularly throughout the last two sessions.

**Graded Studies.**—By the system of graded courses the student is thoroughly drilled in the elementary subjects before proceeding higher. The following are the subjects apportioned to each year:

#### FIRST YEAR

Comparative Anatomy.	Histology: with Laboratory Courses.
Human Anatomy, Descriptive. Particular attention given to Osteology.	Chemistry: with Laboratory Courses.
Dissections.	Materia Medica: with Laboratory Courses.
Physiology: with Laboratory Courses.	Pharmacy.

#### SECOND YEAR

Descriptive Anatomy completed.	Electro-Physics: with Laboratory Courses.
Dissections.	Materia Medica completed.
Physiology completed.	Pathology: with Laboratory Courses.
Histology completed.	Bacteriology: with Laboratory Courses.
Chemistry completed. Laboratory Courses in Urinalysis & Toxicology.	

#### THIRD YEAR

Surgical Anatomy.	Gynecology.
Hygiene.	Obstetrics.
Medical Jurisprudence.	Diseases of Children.
Pathology: with Laboratory Courses.	Nervous and Mental Diseases.
Therapeutics.	Clinical Medicine.
Principles and Practice of Medicine.	Clinical Surgery.
Principles and Practice of Surgery.	Dispensary Clinics.

**FOURTH YEAR**

Therapeutics.	Ophthalmology, Otolaryngology.
Principles and Practice of Medicine.	Applied Chemistry, Pathology, and
Principles and Practice of Surgery.	Bacteriology in Clinical Laboratory.
Gynecology.	Clinical Medicine.
Obstetrics.	Clinical Surgery.
Diseases of Children.	Dispensary Clinics.
Nervous and Mental Diseases.	

At the end of the second year final examinations are given in Descriptive Anatomy, Physiology, Histology, Chemistry, Materia Medica, and Bacteriology. At the end of the third year final examinations are given in Surgical Anatomy and Pathology.

Graduates of this College and those holding certificates of attendance upon lectures are credited for the full time of their medical studies by the Royal College of Surgeons of England, Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow.

**THE COLLEGIATE YEAR**

The sessions begin September 1st and continue eight calendar months.

Regular clinics are held three days each week at the City and County Hospital, where the Professors of the clinical chairs have charge of wards and possess every advantage for the instruction of students; clinics are also held daily at the College Dispensary. Lectures and laboratory courses are given daily by the Professors, and evening recitations are held several times a week.

The student in this city enjoys rare natural advantages for the healthful pursuit of his labors, such a contingency as his detention from lectures or clinics by stress of weather being absolutely unknown.

## LOCATION

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Through the wise munificence of the State Legislature, it has been rendered possible for the Medical Department of the University of California to occupy its magnificent new home south of Golden Gate Park, on a site donated to the University by the late Hon. Adolph Sutro.

The building devoted exclusively to the purposes of the Medical Department occupies the center of the group portrayed in the frontispiece of this announcement. The building on the right is to be occupied by the Hastings College of the Law; that on the left by the Colleges of Pharmacy and Dentistry, jointly. In the rear is a building devoted to the purposes of the Veterinary School.

The building has a frontage of 148 feet and a depth of 208 feet. This includes an auditorium with a seating capacity of 1,200.

In addition to the equipment already in the possession of the Department it is the intention of the Faculty to provide all of the latest and best scientific appliances requisite for teaching. Having in mind chiefly the practical features of teaching, various spacious laboratories, histological, pathological, bacteriological, chemical, physiological and biological, have been provided; also a separate anatomical auditorium, besides various special demonstration rooms for teaching the classes by sections.

By reference to Plate I, giving in outline the plan of the ground floor, it will be seen that there are eight smaller rooms devoted exclusively to clinical purposes besides a large auditorium devoted to clinical surgery.

On this floor are likewise the Anatomical Preparation-room and Students' Locker-room, Janitors' Departments, Storage-room and Lavatories. (Lavatories for each sex are on every floor.)

It is almost superfluous to state, that from a sanitary standpoint the plumbing, heating and ventilation systems of the building are of the latest and most approved type.

The first floor (*vide* Plate II) is entered by means of a stately portico which ushers one into a spacious Entrance Hall, immediately beyond which is a corridor giving access to the rooms along the front of the building and to the main auditorium. On this floor will be found the rooms of the President and the Dean, also three large Recitation rooms and the Biological and Physiological Laboratories.

The Auditorium has four distinct entrances and exits, a capacious stage and gallery; ample light both by day and by artificial means at night.

The second story (*vide* Plate III) contains beside the Pathological, Bacteriological and Chemical Laboratories, the Museum, the Students' Library and a large General Lecture room. At the rear are the entrances and exits to the gallery of the Auditorium.

The third floor (*vide* Plate IV) contains, it is believed, the finest Dissecting-room in the world at the present time. It occupies the greater part of the front of the building, running back 33 feet 6 inches, and is 20 feet high. In this room are 38 tables. The light is brilliant both by means of ample skylights and windows for the day, and by artificial light at night.

The cadavers are preserved by a method which, while excluding decomposition, keeps the tissues soft even after the expiration of two or three years.

In addition, on this floor will be found the Anatomical Lecture-room, immediately beneath the banked seats of which are on one side a Bone-room, containing many duplicate human bones, to be at the disposition of the students, on the plan of a circulating library; on the other side a Locker-room for the use of those dissecting; a Surgical and Histological Laboratory and Photographic-room. The Photographic-room is an especially valuable feature, rendering it possible to photograph rare cases and specimens presented at the Clinics.

There is a complete intercommunicating telephone system between all of the rooms.

The topographical advantages found in the location of the buildings are great. Facing as they do the north, on an elevation to give an unobstructed view over a large part of the peninsula on which San Francisco is situated, with Golden Gate Park in the immediate foreground, an expansive view of the harbor, the Golden Gate and the Pacific Ocean, and the mountains and hills of Marin, Contra Costa and Alameda Counties, they receive the full benefit of the neighboring trade-winds blowing directly from the ocean coupled with the advantage of perfect drainage.

The site of the New City and County Hospital in contemplation by the Supervisors is to be within a few blocks of the College buildings, thus offering clinical advantages conveniently close at hand.

The management of the street railway company is now completing a direct line to the buildings, the line to be extended to the new hospital as well.

A more commodious, better appointed building for the purposes intended it will be difficult to find, nor could the attractions and advantages offered to the student of medicine hardly be greater.

## **MATRICULATION EXAMINATION**

Students desiring to matriculate are required to undergo examinations for admission, with the following exceptions, viz:

1. Applicants who present certificates of having successfully passed the examination for admission to the College of Letters or the Colleges of Science of the University of California, or some other recognized University or College.

2. Applicants who present diplomas or certificates of graduation from the University of California, or of some other recognized University or College.

3. Applicants who present diplomas or certificates of graduation from recognized High Schools and Academies.

4. Applicants who present diplomas or certificates of graduation from a State Normal School of California, or of any other state or territory.

Applicants whose credentials are otherwise satisfactory will be required to pass an examination in Physics, if their certificates do not cover that subject.

Matriculants not presenting satisfactory credentials are required to pass the examination in the subjects named below, conducted by the regular examining board of the Academic Departments of the University. These examinations will be held at Berkeley, August 14, 15 and 16. It is expected that the authorities will also provide an entrance examination at some earlier time at points distant from Berkeley. Applicants who wish to take the examinations held at any place other than Berkeley should notify the Dean of their intention as early as April 1st. Subjects:\* 1, 2, 3, 4, 5, 6a, b, and c, 11, and 12b, c and d.

\*Subjects are numbered to correspond with those of the general list of preparatory subjects for admission to the Colleges at Berkeley.

1. **ENGLISH.**—(a) The examination in this subject will pre-suppose thorough knowledge of grammar and elementary rhetoric, and a study of the following works: (1) *The Lady of the Lake*; (2) *Gayley's Classic Myths in English Literature* (Ginn & Co.), or *Bulfinch's Age of Fable*; (3) *The Alhambra*; (4) *Sir Roger de Coverley*;<sup>\*</sup> (5) *Short Poems: L'Allegro, Il Penseroso, Winter, Tam O'Shanter, The Deserted Village, The Winter Morning Walk, The Cotter's Saturday Night, The Ancient Mariner, Horatius*, and selections from *Byron (Syle's From Milton to Tennyson)*; (6) *The Merchant of Venice*; (7) *Julius Cæsar*; (8) *Macaulay's Warren Hastings*.

While the regular examination will, for the present, be upon these subjects without option, teachers of approved ability, in schools on the accredited list of the University, may, after consultation with the English department, avail themselves of such substitutes as the following: for (1), *The Lay of the Last Minstrel*; for (2), *Tom Brown at Rugby*, or *Ivanhoe*; for (4), *Addison's Select Essays* (Allyn and Bacon); for (5), some twelve poems of similar scope and character; for (6) or for (7), *Macbeth*.

(1b) **ORAL AND WRITTEN EXPRESSION.**—Training in this subject enters into the proper treatment of all topics of study taken up in the school course, and extends to speaking and oral reading as well as to writing. Its aim is to secure to the student the ability to use his mother-tongue correctly, clearly, and pertinently on all the lines upon which his thought is exercised.

A written test in this subject is required of all applicants for the status of special student in the Colleges of Letters, Social Sciences, and Natural Sciences, excepting only those who hold teachers' certificates and those who desire to take only courses in art. In the case of other applicants, for the present no separate examination will be set, but note will be made of correctness of form and adequacy of expression in the various papers written by each.

2. **ARITHMETIC.**—No examination in this subject will henceforward be set, since the study comes regularly in the Grammar School, and its essential processes are involved in Algebra.

3. **ALGEBRA.**—Through Quadratic Equations; namely, the various methods of factoring, the theory of exponents, integral and fractional positive and negative, the calculus of radicals, ratio, and pro-

<sup>\*</sup>Not the meager selection sometimes used, but the full series from the *Spectator* (Thirty-three essays), as published by Cassell or the American Book Co.

portion; quadratic equations, both single and simultaneous, their solution and their theory, including all the recognized methods of solution and all equations reducible to the quadratic form and the formation of equations from given roots.

4. **PLANE GEOMETRY.**—Including the general properties of regular polygons, their construction, perimeters and areas, and the different methods of determining the ratio of the circumference of the diameter.

5. **GOVERNMENT OF THE UNITED STATES.**—A knowledge of the principles of government, Federal, State, and Local. This requirement presupposes an acquaintance with the history of the United States.

6. **LATIN.**—(a) *Cæsar*, Gallic War, books 1-iv; (b) Elementary Latin Grammar: forms and syntax; (c) translation into Latin of simple English sentences.

While the regular examination will be confined to the books of *Cæsar*, teachers of approved ability, in schools on the accredited list of the University, may, after consultation with the Latin department, substitute any ten\* *Biographies of Nepos* for two books of the Gallic War.

11. **PHYSICS.**—The requirement represents at least a daily exercise during one school year, which falls within the last two years of preparation for college. It is expected that the ground covered will include fair representation of primary empirical laws from each of the main subdivisions of Physics.

The results called for demand vigorous and thorough instruction in the class room, based upon laboratory exercises by the pupils. In addition to the test of a written examination, it will be insisted upon that each candidate submit a laboratory note book, signed by his teacher, as evidence that the main principles of the subject as treated have been presented experimentally.

12. **CHEMISTRY, BOTANY, ZOOLOGY.**

(b) **CHEMISTRY**—The preparation required will include a thorough acquaintance with the elementary principles of the science. Laboratory practice is essential. A full year of preparation will be expected.

(c) **BOTANY.**—A knowledge of the morphology and simpler physiology of the higher plants is required. This should be based upon a

\*But Roberts' edition of *Nine Lives of Nepos* will be accepted.



full year of practical work in the laboratory and to some extent, also, in the field. Careful attention should be paid to the recording of observations, by notes and drawings, together with the drawing of correct inferences from the observations. It is desirable that the pupils become familiar with the easier orders of flowering plants represented in the local flora. Bergen's Elements of Botany (Pacific Coast edition), Spaulding's Introduction to Botany, and Setchell's Laboratory Practice for Beginners, indicate both the scope and the method of the work.

(d) ZOOLOGY.—To consist of the actual study of animals, and recitations, the practical work to be the center of the preparation. The practical work should be partly in the laboratory and partly in the field. The chief aim of the examinations in the subject will be to determine *how closely and accurately pupils have observed*. Such guides for study as Boyer's Elementary Biology, Part I, or Colton's Practical Zoology.

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### ADVANCED STANDING

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Students completing at the University of California the three years' Course Preparatory for Medicine are admitted to the Second-Year Class without examination. Upon the completion of the medical course they are given the two degrees of B. Sc. and M. D.

Graduates of recognized Literary and Scientific Colleges are admitted to the Second-Year Class without examination.

Students who have attended one full course in any recognized regular Medical College, requiring a preliminary examination equivalent to the one required by this institution, are, upon passing a satisfactory examination in the curriculum provided for the first year, admitted as students of the Second-Year Class, provided the courses are in different calendar years.

Students who have attended two or three full courses of lectures in any recognized regular Medical College, are, upon passing a satisfactory examination in the curricula of the lower classes, admitted as students of the Third Year or Fourth Year Class respectively, provided the courses of lectures are in different calendar years.

Graduates of recognized regular Medical Colleges requiring attendance upon four courses of lectures are admitted as students of the

Fourth Year Class upon the same conditions as given in the preceding paragraph.

Under no circumstances is a student credited with attendance upon two courses of lectures, unless such courses have been in different calendar years.

Students who have attended one or more courses of lectures in Medical Colleges not requiring a preliminary examination equivalent to the one exacted by this institution are not admitted to advanced standing unless they meet the usual matriculation requirements as given on page 11.

Graduates of Pharmaceutical Colleges in good standing are admitted to the Second Year Class without examination, provided they meet the usual matriculation requirements

Graduates of recognized Dental Colleges requiring an attendance upon three annual courses of lectures are admitted to the Third-Year Class upon passing a satisfactory examination in the curricula of the first and second years, provided they meet the usual matriculation requirements.

Certificates of private study under the direction of a physician are not recognized.

Theological and Law Students are admitted to special lectures without examination.

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## FEES

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Matriculation Fee (paid but once).....	\$ 5 00
Practical Anatomy Ticket for each of two years.....	10 00
Tuition Fee (for each year of attendance).....	100 00
Graduating Fee (paid but once, but not returnable).....	25 00

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A Key and Breakage deposit of five dollars is required each year for the use of lockers and to cover cost of damage to College building and equipment. At the close of the session the unexpended balance is returned to the students. During the last session the charges were nominal. A similar deposit of two dollars and a half is required for each laboratory course taken, to cover cost of material and injury to apparatus. A Breakage deposit of five dollars is required at the College Dispensary, for each of the last two years of the curriculum.

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## REQUIREMENTS FOR GRADUATION

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I. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while at the College. The Faculty reserves the right to terminate the connection of any student with the institution at any time on the ground of what it may deem moral or mental unfitness for the profession.

II. He must have studied medicine four full years and must have attended four regular courses of lectures in separate calendar years, the last of which must have been that of the University of California.

III. He must have passed the required examinations written and oral.

IV. He must have pursued the study of practical Anatomy during at least two sessions, and must present certificates of having dissected every part of the cadaver.

V. He must have paid in full the College fees, including the graduation fee.

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## BOARDING

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The expense of living in San Francisco is not great. Good board with room rent may now be procured at the low rate of five dollars per week, at a convenient distance from the College building.

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## HOSPITAL APPOINTMENTS

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The position of Interne, or House Physician and Surgeon, in the City and County Hospital, is open each year to four members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year, and secure opportunities for accumulating an invaluable experience in every field of Medicine and Surgery.

On completion of the term of service, a certificate is issued by the San Francisco Board of Health and the authorities of the City and County Hospital, as evidence of the faithful performance of the required duties.

Students of the Fourth-Year Class desiring these appointments are required to make application in writing to the Dean, at least two weeks before the close of the session.

The City Receiving Hospital is open to students and graduates of this institution. In this hospital an excellent opportunity is afforded for experience in emergency work.

Several of the private hospitals in the city provide positions on the house staff, which are open to graduates of this College, viz:

St. Mary's Hospital, St. Luke's Hospital, U. S. Marine Hospital, La Maison de Santé (French Hospital), German Hospital, and the Hospital for Children.

Assistants to the staff of the San Francisco Polyclinic are also appointed from the graduates of this institution.

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#### HOSPITAL APPOINTMENTS—FROM CLASS OF 1899.

CITY AND COUNTY HOSPITAL (San Francisco).—*University of California Wards*.—Geo. E. Ebright, Mark L. Emerson, Silvio J. Onesti, Saxton T. Pope, Internes. Rachel L. Ash, Emma Wrightman, Externes. *Polyclinic Ward*.—Bernard F. McElroy, Interne.

ST. LUKE'S HOSPITAL.—Robert T. Legge, Interne.

FRENCH HOSPITAL.—Allen F. Gillihan, William E. Stevens, Gustavus A. Weyer, William P. Willard, Internes.

GERMAN HOSPITAL.—Paul R. Lanz, Interne.

SOUTHERN PACIFIC RAIL ROAD HOSPITAL.—Thomas J. Clark, Samuel J. Gardner, Walter J. Henesey, Internes.

MOUNT ZION HOSPITAL.—Edgar M. Dinkelspiel, Interne.

RECEIVING HOSPITAL (San Francisco).—James E. Rice, Interne.

SACRAMENTO COUNTY HOSPITAL.—Charles F. Millar, George L. Stevenson, Internes.

ST. VINCENT HOSPITAL (Portland).—James E. Taylor, Interne.

PENNSYLVANIA WOMAN'S HOSPITAL.—Vida Redington, Interne.

## COURSES OF INSTRUCTION

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### SPECIAL LECTURES

Professor Joseph Le Conte, Professor of Natural History in the University of California, will give in November two or three lectures upon "The Role of Bacteria in the Processes of Life and Decay."

Professor William E. Ritter, Associate Professor of Biology in the University of California, will give three lectures during the last term of the session upon "Growth, Reproduction and Heredity."

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A brief outline of the course pursued by the several departments will be found in the following summary.

**Anatomy.**—Professor Williamson's course in Anatomy will be illustrated by demonstrations on the cadaver, and by both wet and dry preparations, models, manikins, drawings and diagrams, and will include a course on general, special, topographical and surgical anatomy. The dissecting room is spacious, well ventilated, lighted from above, and provided with the necessary conveniences. It is open daily throughout the year, under the superintendence of the Professor and the Demonstrator of Anatomy. A supply of material is always procurable at small cost. When dissections are conducted in a diligent and satisfactory manner, the student is furnished with certificates stating the amount and part dissected. One of the demonstrators is present daily in the dissecting room during working hours, so that students will receive the proper attention and assistance.

An osteological room is open during the term, where students have the opportunity of studying the anatomy of bones and articulations. Special demonstrations are conducted in this room for members of the First Year Class.

A course of lectures on surgical anatomy is delivered before the Third-Year Class. The course in Anatomy is divided between the Professor of Anatomy and his assistants. A schedule outlining this work is issued to students at the beginning of the term.

The principal feature of the entire course is the thorough drill in Practical Anatomy. Students who have been careless or negligent in their dissections are not granted certificates until by additional work they have entirely covered their deficiencies.

**Physiology.**—The lectures in this department by Professor D'Ancona and Drs. Hawkins and Leland embrace a consideration of both general and special Physiology, and are illustrated by a complete series of colored drawings and by photographs projected upon a screen by means of the stereopticon. The course extends through two years, one year being devoted to the physiology of the nervous system and reproduction, the other to nutrition, respiration, circulation, etc., and the special senses.

The course is supplemented by practical work in the laboratory.

**Normal Histology and Embryology.**—Professor Herbert P. Johnson of the Zoological Department of the University gives a course of lectures and laboratory exercises in which every effort is made to give the student a first-hand knowledge of the subjects taught and, above all, to familiarize him with the use of the microscope, microtome, and the ordinary methods of fixation, staining and mounting of microscopic sections. All the cellular elements of the body are studied and, as far as practicable, the minute anatomy of the various organs.

A few demonstrations of the embryological development of the common fowl are given, towards the close of the term.

The course occupies one afternoon (about four hours) of each week throughout the session.

**Pathology.**—Sections of diseased organs ready for mounting are given the students so that they may become familiarized with the method of preparing specimens for examination. The general principles and operation of pathological laws are fully illustrated and fixed in the mind of the student. The use of the microscope as an aid to diagnosis in the examination of sputum, urine, blood, etc., is also in this way illustrated as opportunity arises. Demonstrations in the laboratory form the prominent portion of the course.

**Bacteriology.**—The new bacteriological laboratory is now equipped with every variety of apparatus necessary in teaching modern bacteriology. The course will be given to the Second-Year Class and will include instruction in making culture media and in their use in the cultivation and differentiation of types of bacteria. The various methods of staining, didactic and laboratory studies of the various pathogenic bacteria, the examination of blood, sputum, feces, water, soil, air, etc., will be taken up in turn. Two afternoons a week for three months will be devoted to this study.

**Medical Chemistry and Materia Medica.**—Associate Professor Green gives special attention to the part of Chemistry relating to Medicine and Pharmacy. The lectures are illustrated by experiments, and the theory is demonstrated practically by excursions to various public works from time to time. The nature, origin, physical and chemical properties of the various remedies official in the United States Pharmacopœia are fully elucidated. The cabinet of Materia Medica, which contains the important as well as the new and rare drugs and pharmaceutical preparations employed in medicine, is used to illustrate the lectures.

**Practical Chemistry.**—The Chemical Laboratory has been thoroughly refitted with the latest and most approved apparatus. Each student is provided with a separate bench and set of apparatus and reagents, performing individually all experiments. A systematic course is given in Practical Chemistry, including qualitative and quantitative analysis of water, foods, milk, urine, mineral and vegetable poisons.

*First Year*—Each student performs a series of experiments in which he develops the main principles of the science of chemistry, and becomes familiar with chemical substances and their reactions.

*Second Year.*—The simplest and most approved methods of examining water, milk and urine, chemically and microscopically, are performed by each student. The course closes with a series of tests for alkaloids in organic and other mixtures.

**Chemical Laboratory.**—*First Year.*—The important feature of the first year's work is the *reactions* of the *acids* and *bases*, together with chemical manipulation from an analytical standpoint. The object of such work is to familiarize the student with acids and salts, together with their behavior towards each other, that he may gain a knowledge of chemical incompatibilities.

*Specific Gravity* with *Hydrometers* and *Westphal Balance* is then considered.

This is to be followed by *Urinalysis* (qualitative). First Part: Normal properties and constituents. Second Part: Abnormal properties and constituents. Third Part: The separation of urinary sediments by the centrifuge, together with the study of their forms, crystalline, organized and amorphous, also their micro-chemic behavior towards reagents.

The *Spectroscope* in its application to the analysis of the flames of volatilizing alkalies and earths; also the identification of the absorption spectra of blood and certain organic colors follows.

*Toxicology* from an analytical standpoint is dwelt upon, embracing the tests for identification of the volatile, mineral and vegetable poisons.

Each student is required to be present at the laboratory sessions, keep desks, apparatus and reagent bottles clean and in order, keep a journal, and submit reports to the professor in charge.

*Second Year.*—*Qualitative relationship of volume and weight*, or specific gravity of solids lighter and heavier than water; of both heavy and light liquids. By means of the Pycnometer, Erdman float and Westphal balance, specific gravity is dwelt upon as much to familiarize the student with the metric system, as for the special teaching and experience gained.

*Quantitative urinalysis* is pursued with a view to aid in diagnosis.

*Urine.*—Volumetric estimations: glucose, acidity, chlorides, albumen, phosphates Gravimetric estimations: sulphates, chlorides, uric acid, albumen. Gasometric estimations: glucose and urea (by decomposition). The analysis of gastric contents, qualitative and quantitative, is carried on.

*The Polariscopes* and its use in estimating the quantities of glucose in diabetic urine, with a control by Fehling's method. The polarization of albumen.

*Milk analysis* according to the standards adopted by the San Francisco Board of Health. Milk, with its organic and inorganic constituents; numerous samples to be analyzed in the laboratory by each student, not only examined as to adulteration but as regards composition.

*Water analysis* from a sanitary standpoint, both qualitative and quantitative, as factors in the determination of purity.

*Toxicology.*—The search for poisons in foods and tissues. The student is required to separate and detect poisons from same, using corroborative methods of identification.

*Food adulteration* and its detection. Tea, coffee, cocoa, butter, sugar, confectionery, honey, beverages, liquors, vinegar, pickles and condiments.

Students are required to be present at laboratory, keep desks, apparatus, reagent bottles, etc., clean and in order, to keep a journal, bring samples, and submit reports to the professor in charge.



**Materia Medica.**—Dr. C. L. Morgan, Instructor in Materia Medica in his course describes fully the various classes of preparations recognized in the U. S. Pharmacopœia and demonstrates practically the method of their preparation. At the same time a knowledge of Pharmacy is imparted and the intricacies of Prescription Writing fully elucidated. Laboratory instruction is given to the Second-Year Class.

**Therapeutics (Medical and Surgical).**—The lectures in this department, by Professor Dodge and Dr. Berndt, explain the physiological actions and therapeutic indications of all agents, medical and surgical, used for the cure, alleviation or prevention of diseases. During the Fourth year Professor Dodge takes up particularly Applied Therapeutics, giving fully the treatment, hygienic, dietetic and medicinal, of the more important diseases.

**Electro-therapeutics.**—Dr. Philip Mills Jones lectures to the Third-Year and Second-Year Classes. The course delivered to the Second-Year Class is devoted to electro-physics, with the object of thoroughly grounding the student in so much of the physics of electricity as is requisite to insure intelligent handling of apparatus and therapeutic application of electricity. After a good working knowledge of the electrical laws and theories necessary to an understanding of the subject and of the principles governing the construction or selection of apparatus has been acquired by the student, he is carefully instructed in the various applications of electricity in diagnosis and in the treatment of disease. The essentials of each method of electrical treatment are fully outlined, in the course of lectures to the Third-Year Class, together with the reasons governing the choice of the particular method employed in each case, the manner of application, the indications, and the changes to be anticipated. The apparatus for producing, and the technique of employing, the X-Rays of Prof. Roentgen are fully explained.

**Surgery.**—Dr. Williamson delivers two lectures each week on the science and art of Surgery. The more recent views on the management of surgical conditions and the appliances devised for their relief are particularly dwelt upon and illustrated with drawings and models when necessary. The course includes a series of lectures upon Operative Surgery, with demonstrations on the cadaver. The students are drilled in manipulation of instruments used in the various operations.

**Practice of Medicine.**—Dr. Herbert C. Moffitt presents in his lectures the Principles and Practice of Medicine in its modern aspects. He gives a description of the different diseases, their etiology, pathology, symptoms, diagnosis, prognosis and treatment. The various pathological changes are demonstrated by means of plates, preparations, and recent specimens of diseased parts.

**Obstetrics.**—The science and art of Obstetrics are taught by Professor R. Beverly Cole and Dr. James L. McCone. Their lectures are fully illustrated by the use of colored plates and drawings, prepared specimens, and the manikin. The principal obstetric operations are performed on the cadaver in the presence of the class.

**Gynecology.**—This subject is taught didactically and clinically by Professor Cole and Associate Professor von Hoffmann. The use of gynecological instruments is carefully shown, and the several procedures explained by means of colored charts, diagrams and manikins.

**Nervous and Mental Diseases.**—The instruction, in addition to the regular lectures by Professor Robertson on the Medical Jurisprudence of Insanity, includes a course on Alcoholism and Narcotics, together with a discussion of the localization of lesions of the nervous system. These lectures are illustrated by specially prepared plates and diagrams, showing the results of the most recent investigations. It is intended to illustrate this subject further by demonstrations of normal and pathological brains and spinal cords.

Functional nervous diseases including the various phases of Hysteria and Hypnotic conditions, will receive special attention. The instruction in both functional and organic diseases of the nervous system is supplemented by clinical lectures and demonstrations. It is intended that the students shall further familiarize themselves with the pathological appearance of nervous tissue, not only by observing sections already prepared, but by actual work in the laboratory, where section cutting, staining, and slide mounting are taught.

In addition to the regular lectures on Insanity, visits are made to the various city and State institutions for the care of the insane, so as to acquaint the students more thoroughly with the characteristic features of the disease.

**Diseases of Children.**—Professor Swan and Associate Professor Lewitt devote one hour each week to this subject, illustrating their lectures by notes drawn from an unusually large experience in the management of diseases peculiar to children.

## CLINICAL TEACHING

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*In Clinical Teaching* the plan pursued by the several Clinical Professors has for its aim the actual confronting of the student with the phenomena of disease, that the senses of sight, hearing and touch may be trained to aid in forming a correct diagnosis.

The facilities for clinical studies open to the students of the University are ample. Full access is given to the City and County Hospital, an institution containing five hundred beds, and presenting for observation perhaps every known form of disease, including those peculiar to tropical and South America. The staff of the Hospital is largely drawn from the Faculty of the University, giving them unusual advantages for developing clinical material. The Professor of Clinical Surgery has charge of three surgical wards (thirty-two beds in each), the Professor of Clinical Medicine two wards, the Professor of Obstetrics and Gynecology and the Professor of Ophthalmology, one ward each. Autopsies are conducted three times a week in the Mortuary by the Pathologist. A large operating theatre has been erected where the major and minor operations of surgery are performed in view of the class. Operating days are Tuesday and Saturday. The Hospital is situated at the junction of Twenty-second street with Potrero avenue, and is accessible from the North Beach and Mission cars, the Howard street, Mission street, and Valencia street lines.

## HOSPITAL CLINICS

**Clinical Surgery.**—Professor McLean and Associate Professor Huntington deliver clinical lectures on Practical and Operative Surgery, at the City and County Hospital, on Tuesdays, Thursdays and Saturdays, throughout the session. Especial attention is given, in a ward devoted to the purpose, to the conduct of disorders of the genito-urinary organs and venereal diseases. A course of Minor Surgery is also given. Instruction in this branch includes the application of bandages and the various dressings used in treating wounds, fractures, dislocations, etc.

REPORT OF THE SURGICAL DIVISION OF THE HOSPITAL OF THE CITY AND COUNTY OF SAN FRANCISCO, UNDER THE CHARGE OF PROFESSOR ROBT. A. McLEAN AND ASSOCIATE PROFESSOR HUNTINGTON OF THE UNIVERSITY OF CALIFORNIA. FROM APRIL 30TH, 1898, TO APRIL 30TH, 1899.

## General Surgery.

Contusions—		Fractures—	
Shoulder .....	5	Clavicle .....	7
Elbow .....	4	Clavicle, Comp .....	3
Face .....	12	Ribs .....	10
Ear .....	3	Ulna .....	2
Eye .....	9	Radius .....	5
Thigh .....	5	Radius, Comp .....	1
Side .....	7	Colle's .....	7
Chest .....	6	Humerus .....	6
Back .....	5	“ Comp .....	2
Leg .....	8	“ Comm .....	1
Ankle .....	14	Ulna and Radius .....	1
	78	Tibia .....	6
Sprains—		“ Comp .....	2
Shoulder .....	4	“ Comm .....	1
Wrist .....	8	Fibula .....	3
Knee .....	7	Pott's .....	6
Ankle .....	27	Tibia and Fibula .....	5
Back .....	5	“ “ “ Comp .....	1
	51	Femur .....	7
Dislocations—		“ Comp .....	3
Clavicle .....	3	“ Intra-Cap .....	4
Shoulder .....	7	“ Ex-Cap .....	2
Elbow .....	5	Crest of Ilium .....	1
Hip-Joint, Femur .....	4	Skull .....	7
Knee .....	2	Inf. Max .....	6
Ankle .....	6	Bones of Hand .....	4
Great Toe .....	3	“ Foot .....	3
	30		106

Wounds—		Gonorrhœa .....	35
Incised .....	14	Gonorrhœal Rheumatism .....	12
Infected .....	11	Periurethral Abscess .....	4
Lacerated .....	16	Urethritis, Simple .....	6
Punctured .....	7	Rupture of Urethra .....	2
Scalp .....	12	Laceration of Urethra .....	5
Stab .....	6	Phimosis, Circumcision .....	18
Gunshot .....	7	Paraphimosis .....	4
	73	Bubo, Suppurative .....	24
Abcess—		Chancroids .....	14
Neck .....	9	Enlarged Prostate—	
Back .....	3	Acute Prostatitis .....	4
Sub-Max. Gland .....	2	Chronic Hyper. Pros.—	
Arm .....	4	Vasectomy .....	3
Axilla .....	6	Castration .....	1
Shoulder .....	3	Irrigation and Pall .....	8
Thigh .....	4		16
Abdominal Wall .....	1	Hernia (*Herniotomy)—	
Lumbar .....	2	Strangulated .....	1
Psoas .....	3	Inguinal, Single .....	12
Multiple .....	5	“ Double .....	4
	42	Femoral .....	1
Syphilis—		Ventral .....	3
Primary, Initial .....	9	Congenital .....	1
Secondary .....	30		22
Tertiary, Bone .....	8	Laparotomy—	
“ Nervous System .....	2	Suppurative Peritonitis .....	4
“ Rectum .....	2	Appendicitis, Acute .....	2
“ Skin .....	14	“ Chronic .....	2
	65	“ Recurrent .....	1
Testicle—		Volvulus .....	1
Epididymitis .....	14	Carcinoma of the Stomach—	
Hydrocele .....	7	Gastrectomy .....	1
“ Double .....	3	Gastro-Duodenostomy .....	1
“ Cord .....	5		12
Orchitis .....	16	Varicose Veins .....	14
Tubercle .....	4	Phlebectomy .....	1
Varicocele .....	3	Acupressure .....	2
	52	Hemorrhoids—	
Stricture of Urethra—		Internal .....	4
By Gradual Dilatation .....	18	External .....	9
By Internal Urethrotomy .....	9		13
By External Urethrotomy .....	4	Tuberculous Osteitis—	
	31	Knee .....	4
Bladder—		Hip .....	2
Cystitis, Gonorrhœal .....	8	Elbow .....	2
“ Simple .....	12		8
Stone .....	3	Gangrene—	
Litholapaxy .....	2	Dry .....	5
Lithotomy .....	1	Moist .....	2
Retention of Urine .....	5		7
	28		

\* Bassini and Kocher's methods.

Resections—	
Knee.....	1
Elbow.....	2
Shoulder.....	1
Other Bones.....	5

Amputations—	
Hip-Joint.....	1
Leg.....	4
Thigh.....	3
Hand and Foot.....	9

Re-amputations.....	2
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Necrosis—	
Tibia.....	4
Ribs.....	7
Inf. Max.....	3
Bones of Hand and Foot.....	5

Ulcers—	
Chronic.....	12
Eczematous.....	5
Phagedenic.....	2
Rodent.....	1
Syphilitic.....	3
Tuberculosis.....	4
Varicose.....	22

Burns—	
First Degree.....	2
Second Degree.....	6

Skin Graft.....	7
Sponge Graft.....	2
Traumatic Hemiplegia.....	5
Traumatic Paralysis.....	4
Trepine.....	3
Dupuytren's Contraction—	
Subcutaneous Division.....	2
Amputation, Fingers.....	3

Empyema.....	6
Resection of Ribs.....	5

Cancer, Microscopical—	
Osteo Sarcoma, Face and Orbit.....	1
“ “ Ilium.....	1
“ “ Orbit.....	1
“ “ Inf. Max.....	2
“ “ Leg.....	1
Lympho. Sarcoma, Neck.....	2
“ “ Thyroid Gland.....	1

Sarcoma, Neck.....	1
Fibro-Sarcoma, Neck.....	1
Epithelioma, Eyelid.....	1
“ Lower Lip.....	2
“ Penis.....	1
“ Tongue.....	1
“ Face.....	1
“ Neck.....	1

Non-Malignant—	
Neuroma.....	2
Lipoma.....	2

Synovitis—	
Teno.....	2
Float. Cart. Knee.....	1
Chronic, Knee.....	6
Ankle.....	2

Carbuncle—	
Back.....	1
Neck.....	4

Aneurism.....	2
Fistula in Ano.....	8
Perineal Fistula.....	5
Fistula of Gall Bladder.....	1
Ischio-Rectal Abscess.....	10
Stricture of Oesophagus.....	1
Concussion of the Brain.....	4
Rupture Biceps, Arm.....	1
Bursitis.....	2
Osteo-Malacia of Spine.....	1
Cerebro-Spinal Lepto Meningitis.....	1
Sciatica, Stretching.....	4
Multiple Myocitis.....	1
Talipes Equinus Varus (Op).....	1
Sebaceous Cysts.....	5
Erysipelas, Facial.....	3
Phlegmon.....	2
Septicemia.....	1
Epistaxis.....	4
Pyo-Nephrosis.....	2
Acute Alcoholism, Injury.....	10

Pediculi—	
Corporis.....	11
Capitis.....	6
Pubis.....	5

Eczema .....	12	Sycosis .....	3
Psoriasis.....	10	Acne.....	5
Trichophytosis Barbae.....	2		

HENRY ABRAHM, M. D.,  
Intern, Wards A and B.

**Clinical Medicine.**—Professor W. W. Kerr will deliver a course of lectures on Clinical Medicine at the same hospital each Tuesday, Thursday and Saturday. The course of study will consist of the demonstration of cases illustrating the different phases and peculiarities which disease assumes, the examination of patients at the bedside by the student, under the guidance of the professor, together with instruction in all those details which qualify the student to discharge his duty agreeably and efficiently in the sick-room.

The students of the Third-Year Class, besides attending the clinical lectures given by Professor Kerr, will be given clinical demonstrations in the wards by Dr. Herbert C. Moffitt. Instructor in Clinical Medicine. Particular attention will be paid to Physical Diagnosis.

REPORT OF THE MEDICAL DIVISION OF THE HOSPITAL OF THE CITY AND  
COUNTY OF SAN FRANCISCO, UNDER THE CHARGE OF PROFESSOR WM.  
WATT KERR, FROM APRIL 30TH, 1898, TO APRIL 30TH, 1899.

Acute Bronchitis .....	29	Chronic Dilatation of Heart.....	19
Chronic Bronchitis.....	19	Hypertrophy of Heart.....	2
Phthisis, Pulmonalis.....	136	Nervous Heart.....	4
“ Miliary .....	3	Angina Pectoris.....	2
Acute Pleurisy.....	14	Arterial Sclerosis .....	17
Chronic Pleurisy.....	6	Aneurism of Aorta.....	4
Purulent Pleurisy.....	1	Acute Alcoholism.....	23
Diaphragmatic Pleurisy.....	1	Chronic Alcoholism.....	13
Pleurodynia.....	1	Tonsillitis.....	2
Pneumothorax.....	1	Pustular Tonsillitis.....	2
Abscess of Lung.....	3	Pyelitis.....	1
Gangrene of Lung.....	1	Purulent Peritonitis.....	4
Catarrhal Pneumonia.....	40	Insomnia.....	1
Bronchial Pneumonia.....	14	Anæmia.....	2
Hypostatic Pneumonia.....	1	Exophthalmic Goitre.....	1
Myocarditis.....	15	Stomach Poisoning.....	2
Mitral Incompetence.....	50	Mustard Poisoning.....	1
“ Stenosis.....	2	Carbolic Acid Poisoning.....	1
Aortic Incompetence.....	10	Temporary Glycosuria.....	1
“ Stenosis.....	10	Peritonitis.....	2
Fatty Heart.....	2	Chronic Interstitial Pancreatitis.....	1
Pericarditis.....	1	La Grippe.....	11
Acute Endocarditis.....	6	Chlorosis.....	1
Acute Dilatation of Heart.....	3	Typhoid Fever.....	16

Bronchial Asthma.....	4	Intermittent Fever.....	31
Cardiac Asthma.....	19	Epilepsy.....	
Measles.....	9	Petit Mal.....	4
Diphtheria.....	2	Grand Mal.....	4
Scarlet Fever.....	1	Jacksonian.....	1
Lead Poisoning.....	2	Paralysis Agitans.....	2
Vertigo.....	1	Tabes Dorsalis.....	7
Acute Diarrhoea.....	4	Neurasthenia.....	19
Chronic Diarrhoea.....	3	Multiple Neuritis.....	19
Myxodema.....	1	Alcoholic Neuritis.....	10
Pernicious Anæmia.....	1	Arsenical Neuritis.....	3
Dysphagia.....	1	Specific Neuritis.....	2
Senility.....	8	Ataxic Paraplegia.....	1
Cholelithiasis.....	4	Senile Paralysis.....	1
Acute Gastritis.....	14	Hemicrania.....	1
Chronic Gastritis.....	17	Occipital Neuralgia.....	1
Gastro Enteritis, Acute.....	7	Intercostal Neuralgia.....	2
Gastralgia.....	3	Supraorbital Neuralgia.....	1
Gastric Ulcer.....	1	Herpes Zoster.....	2
Gastrectasis.....	1	Intern. Hemorrh'ic Pachymen'gitis	1
Colitis, Acute.....	3	Spinal Meningitis.....	2
Acute Constipation.....	1	Cerebro Spinal Meningitis.....	5
Chronic Constipation.....	2	Syringomyelia.....	2
Cirrhosis of Liver.....	19	Paraplegia.....	1
Cancer of Liver.....	4	Monoplegia.....	2
Congestion of Liver, Acute.....	4	Hemiplegia.....	16
Hydatid of Liver.....	1	Thrombus.....	4
Abscess of Liver.....	1	Cerebral Apoplexy.....	18
Fatty Degeneration of Liver.....	3	Encephalomalacia.....	2
Epistaxis.....	1	Sciatica.....	7
Diabetes Mellitus.....	4	Hysteria.....	15
"    Insipitus.....	1	Dipsomania.....	1
Diabetic Coma.....	1	Suicidal Mania.....	1
Chronic Interstitial Nephritis.....	9	Puerperal Mania.....	2
Chronic Parenchymatous Nephritis	9	Melancholia.....	1
Acute Parenchymatous Nephritis.....	5	Katatonia.....	1
Uræmia.....	2	Acute Mania.....	1
Stenosis of Oesophagus.....	2	Suppurative Pylephlebitis.....	1
Gout, Chronic.....	4	Emphysema.....	1
Acute Articular Rheumatism.....	64	Carcinoma of Stomach.....	3
Chronic Articular Rheumatism.....	27	Erysipelas.....	16
Gonorrhœal Rheumatism.....	1	Syphilis.....	6
Muscular Rheumatism.....	5	Volvulus.....	1
Lumbago.....	3	Senile Marasmus.....	1
Remittent Fever.....	7	Not Diagnosed.....	11

THOMAS B. ROCHE, M. D., Interne.



**Gynecology and Practical Midwifery.**—Professor R. Beverly Cole, Associate Professor Charles A. von Hoffmann and Dr. James F. McCone, will hold a Thursday Clinic, including a course of instruction in Operative Gynecology, the use of instruments, appliances, etc. They will devote a portion of their lectures to Clinical Midwifery, taking as illustrations such cases of interest as may occur in the lying-in ward from time to time. The senior students will each, in rotation, have opportunities for the study of Practical Obstetrics at the bedside.

REPORT OF THE CLINIC ON OBSTETRICS AND GYNECOLOGY OF THE HOSPITAL OF THE CITY AND COUNTY OF SAN FRANCISCO, UNDER THE CHARGE OF PROFESSOR R. BEVERLY COLE, ASSOCIATE PROFESSOR CHARLES A. VON HOFFMANN AND DR. JAMES F. MCCONE, OF THE UNIVERSITY OF CALIFORNIA, FROM APRIL 30, 1898, TO APRIL 30, 1899.

Pregnancy.....	5	Chancroid.....	1
Threatening Abortion.....	2	Syphilis.....	15
Abortion.....	5	Gonorrhœa.....	4
Endometritis.....	14	Menorrhagia.....	1
Hemorrhagic Endometritis.....	3	Anæmia.....	1
Endocervicitis, Acute.....	4	Menopause.....	1
“ Chronic.....	7	Metritis.....	1
Oöphoritis.....	3	Pelvic Cellulitis.....	4
Parametritis.....	1	Pelvic Peritonitis.....	2
Vaginitis.....	2	Extra-Uterine Pregnancy.....	1
Bartholinitis.....	2	Movable Kidney.....	2
Retroflexion.....	1	Hemorrhoids, Internal.....	1
Anteversio.....	1	“ External.....	1
Cystocele.....	3	Septicæmia.....	1
Laceration of Perineum.....	7	Retained Membranes.....	2
Laceration of Cervix.....	3	Metrorrhagia.....	2
Stenosis of Cervix.....	1	Appendicitis, Chronic.....	1
Carcinoma of Uterus.....	7	Fissure, Anal.....	2
Carcinoma of Vagina.....	1	Recto-Vaginal Fistula.....	1
Fibroid of Uterus.....	4	Pyosalpinx.....	3
Ovarian Cyst.....	4	Bubo.....	2
Umbilical Hernia.....	1	Shock.....	2
Amenorrhœa.....	1	Dysentery.....	2
Leucorrhœa.....	1		

**Ophthalmology and Otology.**—Professor Powers will deliver one didactic lecture a week during the course, covering the subjects of the Eye and Ear. These lectures will be illustrated by models, charts and blackboard drawings. He will also conduct two clinics a week at the College Dispensary, where, in addition to operative and severe cases, he has a large out-patient clinic, including many children, with many illustrations of cases as they appear in daily practice. At these clinics senior students are required, in turn, to keep record of the cases, with a view to cultivating a habit of casewriting. Associate Professor W. E. Hopkins will hold one clinic a week at the City and County Hospital and deliver a course of lectures on the Nose and Throat with quizzes.

REPORT OF OPHTHALMOLOGIC AND OTOLOGIC DIVISION OF THE HOSPITAL OF THE CITY AND COUNTY OF SAN FRANCISCO, UNDER THE CHARGE OF ASSOCIATE PROF. W. E. HOPKINS OF THE UNIVERSITY OF CALIFORNIA, FROM APRIL 30, 1898, TO APRIL 30, 1899.

EYE CASES.

Conjunctivitis, Catarrhal.....	19	Retinitis, Albuminuric.....	2
"    Gonorrhoeal.....	4	Neuro Retinitis.....	7
"    Phlyctenular.....	8	Choroiditis.....	5
"    Granular.....	11	Glaucoma, Chronic.....	3
Keratitis.....	12	"    Acute.....	2
Foreign Body.....	12	Panophthalmitis.....	9
Pterygium.....	7	Toxic Amblyopia.....	7
Iritis, Syphilitic.....	29	Cataract, Senile.....	18
"    Rheumatic.....	5	"    Soft.....	2
"    Traumatic.....	6	"    Traumatic.....	4
Cyclitis.....	8		
Retinitis, Pigmentosa.....	6	Total.....	186

OPERATIONS.

Enucleations.....	11	Needling.....	10
Cataract Extractions.....	18		
Iridectomies.....	22	Total.....	64
Canthotomies.....	3		

EAR CASES.

Otitis Externa, Catarrhal.....	2	Otitis Media, Purulent.....	14
"    "    Purulent.....	5	Mastoiditis.....	5
Myringitis.....	6		
Otitis Media, Catarrhal.....	24	Total.....	56

OPERATIONS.

Mastoid Operations.....

## NOSE.

Rhinitis, Acute Catarrhal .....	6	Tertiary Syphilis .....	7
"    Chronic Hypertrophic .....	25	Empyema of Frontal Sinus .....	2
"    "    Atrophic .....	6	Deflected Septum .....	4
"    Purulent .....	2		
Polypi .....	10	Total .....	62

## OPERATIONS

Removal of Polypus .....	10
Empyema of Frontal Sinus .....	1
For Deflected Septum .....	2
Total .....	13

## THROAT.

Pharyngitis, Granular .....	30	Tubercular Ulceration of Palate ..	2
"    Sicca .....	8	"    Laryngitis .....	26
Tonsillitis .....	13		
Tonsillar Abscess .....	4	Total .....	83

HUGH LAGAN, M. D.

## OUT-PATIENT CLINICS

The Faculty has organized a Free Dispensary Clinic, which is held at 155 New Montgomery Street. This clinic is located in the heart of a thickly populated district, where clinical material of every description is extremely abundant. The clinical rooms are large and airy, and provided with every facility for the successful demonstration and treatment of disease.

A full staff of clinicians and assistants has been appointed, and clinics are held daily throughout the year. Cases applying for treatment are classified according to their diseases and assigned to the different clinicians.

During the sessions of the College, every advanced student will have an opportunity to observe and attend personally a large number of cases, under the direct supervision of the clinical staff.

The advantage of an out-patient clinic lies in the fact that the varieties of cases presented for observation are, to a great extent, those seen in office practice. Combined with hospital work, the Dispensary Clinic forms an invaluable system of practical training for the student.

A fully equipped pathological and bacteriological laboratory is conducted in conjunction with the clinic, wherein examinations are made of urine, sputum, abnormal growths, etc., so that the student may obtain simultaneously a view of the pathological and of the clinical aspect of disease processes.

An obstetrical bureau has been established where indigent women may make application for attendance at their own homes during confinement. The clinician in charge of this department will assign cases in rotation to students of the Fourth-Year Class.

## OUT-PATIENT DEPARTMENT.

REPORT OF THE UNIVERSITY OF CALIFORNIA OUT-PATIENT DEPARTMENT FOR THE YEAR ENDING APRIL 30TH, 1899.

	Total Visits.
Dermatological Clinic.....	2628
Surgical Clinic.....	4164
Gynecological Clinic.....	2045
Genito-Urinary Clinic.....	1072
Medical Clinic.....	3641
Orthopedic Clinic.....	624
Children's Medical Clinic.....	292
Nervous Diseases.....	288
Eye and Ear Clinic.....	2490
Nose and Throat Clinic.....	1228

## Surgical Out-Patient Clinic.

CHIEF OF CLINIC, DR. H. B. A. KUGELER; ASSISTANT, DR. M. B. RYER.

## HEAD AND NECK.

Abscess, Alveolar .....	1	Furuncle .....	6
"    Cervical .....	6	Necrosis of Inferior Maxilla .....	1
"    Face .....	3	Phlegmon of Neck .....	1
Adenitis, Cervical .....	5	Ranula .....	1
Carbuncle of Neck .....	4	Tumor of Neck and Axilla .....	1
Caries of Superior Maxilla .....	1	Ulcers, Rodent of Lip .....	3
Contusions, Face .....	2	"    Face .....	2
"    Head .....	7	Wounds—	
"    Neck .....	1	Incised Scalp .....	4
Cornua of Skin over Zygoma .....	1	Infected Scalp .....	6
Cysts of Neck, Sebaceous .....	2	"    Face .....	3
"    Scalp and Face .....	6	"    Neck .....	2
Epithelioma of Lip .....	2	"    Eye .....	5
Erysipelas of Face .....	1	Lacerated Scalp .....	17
Fracture, Nasal Bones .....	2	"    Face .....	5
"    Inferior Maxillary .....	3	"    Ear .....	2
"    Skull .....	1		

## UPPER EXTREMITY.

Abscess, Arm .....	6	Fracture, Humerus .....	1
"    Axilla .....	7	"    Thumb .....	1
"    Hand and Fingers .....	11	"    Clavicle .....	2
Burn, Arms .....	4	Furuncle, Arm .....	3
"    Hand and Fingers .....	13	Ganglion, Hand and Wrist .....	5
Bursitis, Olecranon .....	3	Paronychia .....	3
Carbuncle of Arm .....	1	Phlegmon, Arm .....	4
Cellulitis of Arm .....	2	"    Hand and Fingers .....	11
Contusion of Arm .....	4	Sprain, Arm and Elbow .....	4
"    Shoulder .....	5	"    Hand, Wrist and Fingers .....	6
"    Elbow .....	3	Synovitis, Wrist .....	1
"    Hand and Fingers .....	14	Tenovaginitis, Forearm .....	3
Contraction of Arm .....	1	Wounds, Gunshot Arm .....	2
Dislocation, Humerus .....	1	"    Hand and Fingers .....	1
Dupuytren's Contraction .....	2	"    Stab of Arm .....	1
Foreign Body in Arm and Hand .....	4	Laceration of Arm .....	4
Felon .....	6	"    Hand and Fingers .....	17
Fracture, Colle's .....	5	Infected Wound of Arm, Hand	
"    Radius .....	2	and Fingers .....	18
"    Ulna and Radius .....	2		

## CHEST AND BACK.

Burn of Back .....	1	Enchondroma of Rib .....	1
Carbuncle of Back .....	1	Fracture of Ribs .....	2
Carcinoma of Breast .....	1	Sprain of Back .....	2
Contusion of Ribs .....	4	Wounds of Chest .....	2
"    Back and Chest .....	4		

## ABDOMEN AND PELVIS.

Abscess, Ischio-Rectal .....	2	Hæmorrhoids, External .....	3
Condylomata Ani .....	1	"    Internal .....	6
Fissure in Ano .....	1	Hernia, Inguinal .....	6
Fistula, External Incomplete .....	1	Prolapsus Ani .....	1
"    Complete .....	4	Ulcer of Rectum .....	1
Hæmatoma of Labia Majora .....	1		

LOWER EXTREMITY.

Abscess, Leg .....	3	Sprain, Ankle.....	5
Ankylosis of Knee .....	1	"    Knee .....	3
Bubo.....	4	Sesamoid Bone of Great Toe Re-	
Burn, Leg.....	3	moved.....	1
"    Foot.....	2	Subluxation of Toe.....	2
Carbuncle of Leg .....	1	Synovitis Tubercular Knee.....	1
Contusion, Knee .....	5	Tuberculosis of Ankle.....	1
"    Thigh.....	2	Syphilis of Tibia.....	1
"    Foot.....	3	Varicose Veins.....	3
Crushed Ankle.....	1	Ulcers, Simple.....	5
"    Foot.....	1	"    Specific.....	10
"    Knee.....	1	"    Chronic.....	8
Coxitis.....	1	"    Vancose.....	11
Fracture, Patella .....	1	Verruca of Leg.....	1
Furuncle, Leg.....	1	Wounds—	
Hydrocele of Cord .....	1	Lacerated Knee.....	3
Hydrops of Knees, Specific.....	1	"    Leg and Thigh.....	7
Ingrowing Toe-Nail.....	4	Infected Wounds of Leg.....	6
Phlegmon of Foot.....	1	"    "    Knee.....	3
Periostitis of Tibia.....	1	"    "    Thigh.....	2
"    Instep.....	1		

Surgical Out-Patient Clinic.

SECTION II.

PROF. JOHN C. SPENCER; ASSISTANT, DR. JAMES P. H. DUNN.

Report of Cases from April 30, 1898, to April 30, 1899.

HEAD AND NECK.

Abscess of Parotid Region.....	1	Lymphadenitis, Tuberc. of Neck.....	2
"    Maxillary Region.....	1	Sinus of Inferior Maxilla.....	1
"    Neck.....	4	"    Forehead.....	1
Abrasion of Forehead.....	1	Wound, Contused, of Eyebrow.....	1
Adenitis, Sublingual, Subacute.....	1	"    "    Lip.....	1
Carbuncle, ".....	1	"    "    Forehead.....	5
Cellulitis, "    "    ".....	1	"    "    Scalp.....	3
Contusion of Eye.....	1	"    Gunshot, of Eyebrow.....	1
"    Face.....	1	"    Incised, ".....	2
"    Forehead.....	1	"    "    Forehead.....	1
"    Jaw.....	1	"    "    Scalp.....	1
"    Nose.....	1	"    Lacerated of Face.....	6
Cyst, Dermoid, of Scalp.....	1	"    "    Nose.....	5
Fracture of Nasal Bone.....	2	"    "    Scalp.....	22
Gingivitis.....	1		
Hæmatoma, Auris.....	2		

73

CHEST AND BACK.

Carcinoma of Breast.....	1	Lumbago.....	1
Contusion of Back.....	1	Mastitis in Male, Chronic.....	1
"    Chest.....	1	Strain of Chest.....	1
"    Scapular Region.....	1		
Fracture of Rib.....	1		

8

## UPPER EXTREMITY.

Abcess, Forearm.....	2	Lymphadenitis, Axillary.....	1
Abrasion of Hand.....	2	Paronychia.....	2
Burn of Hand, 1st degree.....	3	Rupture, Biceps Brach., long tend.....	1
"    "    2d degree.....	6	Sprain of Forearm.....	2
Bite of Hand.....	1	"    Shoulder.....	4
Bursitis, Olecranon bursa, traum.....	2	Subluxation of Costal Cartilage..	1
Cellulitis, Olecranon.....	1	Synovitis of Carpus, Syphilitic...	1
Cicatrix, Painful.....	1	Separation, Head of Rad., Epiph.	1
Contusion of Hand.....	3	Whitlow of Finger.....	1
"    Shoulder.....	7	Wound, Contused, of Hand.....	4
"    Wrist.....	2	"    Incised, of Hand.....	9
Dislocation of Shoulder.....	1	"    Forearm.....	2
Dupuytren's Contraction.....	1	"    Infected, of Hand.....	23
Felon of Finger.....	3	"    Forearm.....	3
Fracture of Clavicle.....	1	"    Lacerated, of Ear.....	1
"    Humerus.....	1	"    Finger.....	5
"    Metacarpal Bone.....	1	"    Hand.....	13
"    Olecranon.....	1	"    Penetrating Stab.....	1
"    Radius (Colle's).....	2		
"    Radius (Greenstick).....	1		
Ganglion of Wrist.....	3		120

## ABDOMEN AND PELVIS.

Abcess, Perineal.....	2	Hernia, Inguinal, Direct.....	3
"    Vulvo Vaginal.....	2	"    Umbilical.....	1
Epididymitis.....	1	Lymphadenitis, Inguinal.....	1
Fistula in Ano.....	2	Sinus, Umbilical, Tuberculosis...	1
Hemorrhoids, External.....	2		
"    Internal.....	1		16

## LOWER EXTREMITY.

Abrasion of Foot.....	1	Ulcer of Foot.....	2
Anchylosis of Tarsus.....	1	Wound, Contused, of Foot.....	1
Burn of Foot, 2d degree.....	1	"    Incised, of Leg.....	1
Bursitis, Patellar.....	2	"    Foot.....	1
Contusion of Leg.....	4	"    Infected, of Leg.....	5
"    Hip.....	1	"    Thigh.....	1
Fracture of Leg (Potts').....	1	"    Toe.....	1
Lymphangitis, Subacute, of Leg.,	1	"    Lacerated, of Leg.....	1
Myalgia of Thigh.....	1	"    Thigh.....	1
Phlebitis of Leg.....	1	"    Punctured, of Foot.....	1
Sprain of Ankle.....	4		
Synovitis of Knee, Traumatic.....	2		43
Ulcer of Leg.....	8		

## SUMMARY.

Head and Neck.....	73
Upper Extremity.....	120
Chest and Back.....	8
Abdomen and Pelvis.....	16
Lower Extremity.....	43

Genito-Urinary Clinic.

PROFS. JOHN M. WILLIAMSON AND JOHN C. SPENCER.

ASSISTANT: CECIL M. ARMISTEAD, M. D.

From May 1, 1898, to May 1, 1899.

Balanitis.....	3	Nocturnal Emissions.....	3
Balano-Posthitis.....	3	Orchitis.....	10
Bubo, Suppurating.....	17	Phimosis.....	15
" Non-Suppurating.....	8	Paraphimosis.....	4
Bladder, Atony of.....	4	Prostatic Hypertrophy.....	10
Chancroidal Ulcers.....	26	Prepuce, Laceration of.....	1
Cystitis, Acute.....	2	Prostatitis, Acute.....	6
" Chronic.....	1	Rheumatism, Gonorrhœal.....	2
Contusion, Vas. Deferens.....	1	Syphilis, Primary.....	15
Epididymitis.....	20	Urethra, Stricture of.....	12
Gonorrhœa, Acute.....	66	Urethritis, Simple.....	9
" Subacute.....	18	Urethral Fistula.....	1
" Chronic.....	21	Veneræ Warts.....	3
" Recurrent.....	3	Varicocele.....	3
Herpes Preputialis.....	10	Undiagnosed, due to refusal to submit to examination.....	3
Hydrocele.....	16		
Hypochondriasis.....	3		
Masturbation.....	1	Total.....	330

Medical Out-Patient Clinic.

SECTION I.

CHIEF OF CLINIC, D. E. F. EASTON, M. D.; ASSISTANT, SANFORD BLUM, M. D.

Gastric Indigestion.....	3	Emphysema.....	3
Atonic Dyspepsia.....	20	Bronchial Asthma.....	9
Flatulent Dyspepsia.....	13	Pulmonary Congestion.....	3
Acid Dyspepsia.....	11	Acute Rheumatism.....	5
Acute Gastritis.....	10	Subacute and Chron. Rheumatism.....	21
Subacute and Chronic Gastritis.....	9	Syphilitic Arthritis.....	31
Gastralgia.....	8	Gonorrhœal Arthritis.....	3
Gastric Cancer.....	2	Arthritis Deformans.....	2
Acute Intestinal Indigestion.....	6	Acute Muscular Rheumatism.....	3
Intestinal Colic.....	3	Subacute and Chron. Mus. Rheum.....	4
Acute Catarrhal Enteritis.....	6	Myalgia.....	11
Chronic ".....	7	Lumbago.....	17
Acute Gastro Enteritis.....	9	Pleurodynia.....	5
Dysentery.....	1	Acute Nephritis.....	1
Chronic Constipation.....	18	Chronic Interstitial Nephritis.....	4
Tænia Mediocanellata.....	3	Sciatica.....	1
Ascaris Lumbricoides.....	1	Sciatic Rheumatism.....	1
Pseudo-Angina.....	1	Congestion of Liver.....	5
Valvular Disease of Heart.....	38	Hypertrophic Cirrhosis of Liver.....	2
Nervous Hypertrophy of Heart.....	3	Cirrhosis of Liver.....	5
Influenza.....	23	Catarrhal Jaundice.....	4
Acute Laryngitis.....	3	Uric Acid Diathesis.....	1
Acute Bronchitis.....	26	Fibroid Goitre.....	1
Subacute and Chronic Bronchitis.....	42	Lymphadenoma.....	1
Phthisis Pulmonalis.....	26	Acute Alcoholism.....	1
Dry Pleurisy.....	9	Potomaine Poisoning.....	3
Adhesive Pleurisy.....	2	Typhoid Fever.....	3
Pleurisy with Effusion.....	7	Malarial Infection.....	9



Parotiditis.....	2	Hemicrania.....	1
Occipito Cervical Neuralgia.....	1	Locomotor Ataxia.....	1
Tic-Douloureux.....	1	Obesity.....	1
Facial Paralysis.....	1	Insomnia.....	4
Tarsalgia.....	1	Anæmia.....	2
Mercurial Ptyalism.....	2	Chlorosis.....	1
Iodism.....	1	Plethora.....	1
Plumbism.....	2	Lipoma of Omentum.....	1
Diabetes Mellitus.....	3	Swallowed a \$5 Gold Piece.....	1
Diabetes Insipidus.....	1	Undiagnosed.....	8
Neurasthenia.....	1		
Melancholia.....	1		
Hypochondria.....	1		
			<b>478</b>

### Medical Out-Patient Clinic.

#### SECTION II.

CHIEF OF CLINIC, J. MORA MOSS, M. D.; ASSISTANT, F. R. DRAY, M. D.  
Tabulation of Cases from May 1st, 1898, to April 30th, 1899.

#### SPECIFIC INFECTIOUS DISEASES.

Erysipelas.....	1	Syphilis.....	3
Influenza.....	12	Tuberculosis of Lungs.....	55
Malaria.....	14	Typhoid.....	4
Malarial Cachexia.....	4		

#### CONSTITUTIONAL DISEASES.

Arthritis Deformans.....	1	Rheumatism, Chronic & Sub acute.....	14
Diabetes Mellitus.....	2	“ Muscular.....	28
Myositis.....	1	Senility.....	1
Rheumatism, Acute Articular.....	13		

#### DISEASES OF DIGESTIVE TRACT.

Tonsillitis, Acute.....	3	Dysentery.....	1
Gastritis, Acute Catarrhal.....	6	Appendicitis.....	5
“ Chronic Catarrhal.....	44	Constipation.....	5
Gastric Carcinoma.....	2	Enteroptosis.....	1
Gastro-Enteritis, Acute.....	13	Tænia Mediocanellata.....	1
Nervous Dyspepsia.....	1	Hepatitis, Acute.....	1
Mercysism.....	1	Catarrhal Jaundice.....	1
Enteritis, Acute Catarrhal.....	6	Cirrhosis of Liver.....	3
Sigmoiditis, Acute.....	2		

#### DISEASES OF RESPIRATORY SYSTEM.

Bronchial Asthma.....	4	Pleuritis Sicca.....	10
Bronchitis, Acute.....	53	“ Sero-Fibrinous.....	2
“ Sub-acute & Chronic.....	19	Pneumonia, Croupous.....	5
Coryza.....	2	“ Irregular Lobar.....	1
Emphysema.....	2	Hydrothorax.....	1

DISEASES OF HEART AND VESSELS.

Acute Endocarditis.....	6	Chronic Myocarditis.....	10
Chronic Valvular Diseases—		Dilatation of Heart.....	1
Aortic Insufficiency.....	3	Simple Hypertrophy.....	1
" Stenosis.....	3	Arteriosclerosis.....	9
Mitral Insufficiency.....	5	Aneurism of Aorta.....	1
" Stenosis.....	1	Varicose Veins.....	2

DISEASES OF THE BLOOD AND THYROID GLAND.

Chlorosis.....	8	Exophthalmic Goitre.....	1
Chlorosis Rubra.....	1		

DISEASES OF THE KIDNEYS AND BLADDER.

Cystitis.....	4	Nephritis, Acute.....	2
Nocturnal Enuresis.....	·	" Chronic Interstitial....	2
Renal Calculus.....	2	" Parenchymatous.....	3

DISEASES OF THE NERVOUS SYSTEM.

Hemicrania.....	4	Neuralgia, Sciatic.....	5
Hypochondriasis.....	4	Neuritis.....	6
Hysteria.....	18	Neurasthenia, General.....	15
Neuralgia, Intercostal.....	14	" Sexual.....	1
" Trigeminal.....	4	" of Climateric.....	1

INTOXICATIONS.

Alcohol.....	2	Tobacco.....	1
Lead.....	2	Opium Habit.....	4

UNCLASSIFIED.

Myositis.....	1	No Diagnosis.....	7
Disorders of Pregnancy.....	2		
Senility.....	1	Total.....	506

**Diseases of the Skin.**—The clinic for diseases of the skin will be utilized as far as possible for the study of pathology. Disease processes, which in many other branches of medicine are hidden, can be actually seen in a clinic for diseases of the skin. In order to utilize the material to the fullest extent the classes are divided, and Dr. A. B. Grosse takes the third-year class and demonstrates diseases of the skin as much as possible from a physiological and anatomical standpoint, while Prof. D. W. Montgomery takes the fourth-year class and lays particular stress on the pathology.

### Diseases of the Skin Out-Patient Clinic.

PROF. DOUGLASS W. MONTGOMERY.

ASSISTANTS, A. B. GROSSE, M. D., ERNEST PRING, M. D.

Acne.....	13	Pityriasis Maculata et Circinata..	3
Alopecia.....	2	"    Rosea.....	1
"    Areata.....	3	Piuritis Ani.....	5
Chancroids.....	18	Psoriasis.....	15
Dermatitis, Medicamentosa.....	3	Puerpeia, Hærophelia.....	1
"    Venenata.....	4	"    Rheumatica.....	2
Eczema.....	77	Pyogenic Infection.....	8
Epithelioma.....	7	Rosacea.....	1
Erysipelas.....	2	Rubella.....	1
Erythema, Nodosum.....	1	Scabies.....	17
"    Simplex.....	5	Seborrhœa, Oleosa.....	4
Ecthyma.....	4	"    Sicca.....	3
Furunculus.....	9	Sycosis Vulgaris.....	4
Herpes, Simplex.....	4	Syphiloderma.....	76
"    Zoster.....	3	Tinea Trichophytina Circinata..	6
Impetigo, Contagiosa.....	14	"    "    "    Tonsurans.....	4
Keloid.....	1	"    "    "    Sycosis.....	2
Keratosis Pilaris.....	14	Tinea Versicolor.....	2
Leprosy.....	1	Urticaria.....	7
Lentigo, Maligna.....	1	Ulcer, Simplex.....	12
Lipoma.....	1	Verruca.....	3
Lupus, Erythematosus.....	1	Varicella.....	1
Leucoplakia.....	4	Unclassified.....	19
Pediculosis, Capitis.....	15		

### Ophthalmological and Otological Clinic.

From May 1, 1898, to May 1, 1899.

PROFESSOR GEO. H. POWERS.

CHIEF OF CLINICS, DR. GEO. MERRITT.

ASSISTANTS, HUGH LAGAN, M. D., R. H. ORR, M. D., GRACE FEDER, M. D.  
ADELINA FEDER, M. D., Clinical Clerk.

#### DISEASES OF THE EYE.

Conjunctivitis, Acute.....	5	Ophthalmia Neonatorum.....	2
"    Catarrhalis.....	40	Keratitis, Parenchymatous.....	7
"    Follicularis.....	32	"    Phlyctenularis.....	6
"    Phlyctenularis.....	31	Ulcer of the Cornea.....	15
"    Trachomatous.....	4	Abscess of the Cornea.....	6

Panrus.....	1	Myopia.....	5
Foreign Bodies.....	23	Myopic Astigmatism.....	3
Scleritis.....	2	Strabismus, Convergens.....	4
Glaucoma, Chronica.....	1	"    Divergens.....	2
Choroiditis, Chronica.....	2	Paresis Motor Oculi.....	1
"    Disseminata.....	6	Stenosis of the Lachrymal Duct..	15
Iritis, Simplex.....	2	Enlargement of Lachrymal Gland	1
"    Chronica.....	4	Hordeolum.....	6
"    Specifica.....	16	Chalazion.....	14
"    Rheumatica.....	3	Nystagmus.....	4
"    Traumatica.....	2	Eczema of the Lids.....	3
Staphyloma, Anterior.....	3	Dacrocystitis.....	1
Staphyloma, Posterior.....	11	Entropium.....	2
Cataracta Matura.....	3	Blepharitis Marginalis.....	20
"    Immatura.....	10	Choked Disc.....	1
"    Senilis.....	11	Spasm of Accommodation.....	2
"    Stellata.....	1	Piosis.....	1
Luxatio Lentis.....	1	Pappillitis.....	4
Atrophy of the Optic Nerve.....	5	Phthisis Bulbi.....	1
Neuritis.....	2	Infection.....	5
Retinitis.....	5	Muscae Volitantes.....	4
"    Albuminurica.....	1	Sympathetic Ophthalmia.....	1
"    Hemorrhagica.....	2	Mydriasis.....	2
Retinal Detachment.....	4	Pterygium.....	3
Amblyopia Alcoholica.....	7	Traumatism.....	5
Astigmatism.....	15		
Hypermetropia.....	25		437
Hypermetropic Astigmatism.....	11		

OPERATIONS.

Cataract.....	3	Expression Trachoma Follicles...	1
Removal of Foreign Bodies.....	23	Removal of Pterygium.....	3
Incision, Hordeolum.....	6	Grattage.....	3
"    Chalazion.....	14		
"    Lachrymal Duct.....	10		63

DISEASES OF THE EAR.

Eczema, Auricle.....	1	Contusion Ext. Auditory Meatus.....	1
Furunculosis.....	3	Affection of the Auditory Nerve..	5
Aural Polypi.....	2	Inspissated Cerumen.....	42
Otitis, Acute.....	6	Foreign Bodies.....	3
"    Externa.....	11	Perforated Tympanum.....	10
"    Purulent.....	12	Mastoiditis.....	1
"    Media Catarrhalis.....	30	Myringitis.....	1
"    Media Sicca.....	14		
Congenital Deafness.....	1		156
Chronic Catarrhal Deafness.....	13		

OPERATIONS.

Removal Foreign Bodies.....	3
Removal Aural Polypi.....	2
Incision Furunculi.....	3
	8

**Nose and Throat Clinic.**

From January 1 to May 1, 1899.

PROF. GEORGE H. POWERS.

ASSISTANTS: F. B. EATON, M. D., GARDNER P. POND, M. D.

**DISEASES OF THE NOSE.**

Rhinitis, Simplex.....	4	Deflected Septum.....	10
“ Atrophica.....	6	Enlarged Turbinate.....	21
“ Hypertrophica, Chron..	10	Atrophied Turbinate.....	2
“ Specifica.....	1	Empyema, Frontal Sinus .....	1
Ozæna.....	2		
Empyema, Antrum, Highmore..	1	Total .....	64
Polypi, Nasi.....	6		

**OPERATIONS ON NOSE.**

Removal Nasal Polypi.....	6
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**DISEASES OF THE THROAT.**

Pharyngitis, Simplex.....	15	Tonsillitis, Follicular.....	3
“ Chronica.....	7	“ Hypertrophica.....	15
“ Specifica.....	2	Peritonsillar Abscess.....	2
Elongated Uvula.....	3	Paresis, Vocal Cord, Left.....	2
Laryngitis, Acuta.....	18	Adenoids.....	22
“ Specifica.....	1		
“ Tubercular.....	1	Total .....	92
Tonsillitis, Specifica.....	1		

**OPERATIONS ON THROAT.**

Amputation Uvula.....	2
Removal Adenoids.....	18

GRACE SIMON, M. D., Clinical Clerk.

**Obstetrical and Gynecological Clinic.**

PROF. R. BEVERLY COLE. ASSOCIATE PROF. CHARLES A. VON HOFFMANN.

JAMES F. McCONE, M. D., CHIEF OF CLINIC.

ASSISTANT: M. B. RYER, M. D.

Number of Cases Treated.....	487
Total Number of Visits.....	2607

**DIAGNOSIS.**

Pregnancy, Normal.....	15	Ulcers of the Vulva—	
Abnormal—		Syphilitic, Primary.....	3
Threatened Abortion.....	5	“ Secondary.....	7
Incomplete Abortion.....	3	Imperforate Hymen.....	1
Ectopic Gestation.....	2	Lacerated Perineums.....	13
Vaginitis and Pregnancy.....	3	Abscess of Vulvo-Vaginal Glands	2
Gonorrhœa.....	5	Inguinal Bubo.....	2
Inguinal Hernia.....	1	Vaginitis, Simple.....	6
Retroflexion.....	2	“ Senile.....	2
Mitral Disease.....	1	“ Gonorrhœal.....	6
Confinements, Normal.....	15	Relaxed Vaginal Opening.....	3
Abnormal—		Post-Operative Vaginal Scars.....	2
Puerperal Insanity.....	1	Vaginal Cyst.....	1
Delayed Puberty.....	2	Cystocele.....	5
Menopause.....	8	Rectocele.....	3
Vulvitis, Simple.....	4	Recto-Vaginal Fistula.....	1
“ Diabetic.....	4	Prolapsus Uteri.....	5
“ Gonorrhœal.....	8	Anteflexion of the Uterus.....	4

Retroflexion of the Uterus—		Ovarian Cysts.....	2
Simple.....	4	Parametritis.....	4
Adherent.....	3	Peritonitis, Syphilitic.....	1
Retroversion.....	15	Parametritis, Acute.....	1
Endometritis, Simple.....	15	"    Atrophica.....	4
Endometritis, Gonorrhoeal.....	5	Urethritis, Gonorrhoeal.....	10
"    Hemorrhagic.....	4	Urethral Prolapse.....	2
Endocervicitis.....	17	Caruncle.....	3
Subinvolution.....	1	Periurethral Abscess.....	1
Post-Curettage, Superinvolution.....	2	Cystitis, Acute.....	1
Post - Operative Obliteration of		"    Chronic.....	9
Cavity of the Uterus.....	1	Hemorrhoids.....	8
Lacerated Cervix.....	8	Prolapsed Rectum.....	2
Carcinoma of Cervix.....	2	Stricture of Rectum.....	2
Epithelioma of Cervix.....	4	Sigmoid Carcinoma.....	1
Carcinoma of Body of Uterus.....	3	Colitis.....	2
Fibroid of Uterus.....	2	Abscess of the Breast.....	2
Infantile Uterus.....	1	Carcinoma of Mammar.....	2
Salpingitis.....	3	Sexual Perversion.....	1
Tubo Ovarian Abscess.....	1	Umbilical Hernia.....	1
Oophoritis.....	5	Sinus after Alexander's Operation.....	1
Prolapsus Ovarii.....	2	Sinus after Laparotomy.....	1
Parovarian Cysts.....	2		

### Diseases of Children Clinic.

#### SECTION 1.

##### WM. NATHAN, M. D., CHIEF OF CLINIC.

Anæmia.....	3	Indigestion, Intestinal.....	3
Ascaris Lumbricoides.....	2	Influenza.....	2
Bronchitis, Acute.....	1	Jaundice.....	1
"    Chronic.....	5	Malaria.....	6
"    Tracheo.....	18	Malnutrition.....	4
"    After Measles.....	2	Mitral Regurgitation.....	1
Catarrh, Gastro-Intestinal.....	5	Pericarditis, Subacute Effusion.....	1
"    Intestinal.....	2	Rachitis.....	2
Cholera Infantum.....	1	Rheumatism.....	1
Chorea.....	2	Syphilis, Congenital.....	1
Constipation.....	2	Tonsillitis, Acute Follicular.....	1
Enuresis Nocturna.....	1	Whooping Cough.....	10
Hysteria.....	2	Undiagnosed.....	6
Indigestion, Gastric.....	1		
"    Gastro-Intestinal.....	4	Total Number Cases.....	90

#### SECTION 2.

##### FREDERICK R. STARR, M. D., CHIEF OF CLINIC.

Anæmia.....	6	Scarlet Fever.....	1
Debility, General.....	2	Measles.....	2
Malnutrition.....	3	Diphtheria.....	2
Indigestion, Intestinal.....	10	Tonsillitis.....	2
"    Gastric.....	3	Meningitis, Tubercular.....	1
Catarrh, Gastric-Intestinal.....	5	Otitis.....	1
Diarrhoea.....	4	Enuresis.....	3
Bronchitis.....	9	Vaginitis, Specific.....	2
Pneumonia, Lobar.....	2	"    Non Specific.....	1
Emphysema.....	1	Stomatitis, Catarrhal.....	1
Pneumonia, Broncho.....	2	Tumor, Right Rectus.....	1
Pertussis.....	4	Jaundice, Catarrhal.....	4

Oxyuris Vermicularis.....	2	Cephalalgia.....	1
Ascaris Lumbricoides.....	1		
Rheumatism.....	4	Total Number Patients.....	82
Asthma.....	2		

### Neurological Clinic.

LEO NEWMARK, M. D., CLINICAL LECTURER ON DISEASES OF THE NERVOUS SYSTEM. ASSISTANT: EDWARD VON ADELUNG, JR., M. D.

Chorea.....	3	Defective Speech, Developmental	1
Tabes.....	6	Idiocy.....	1
Epilepsy.....	5	Hysteria, Major.....	1
Hystero-Epilepsy.....	1	Traumatic Neurosis.....	1
Wing Scapula.....	1	Lordosis.....	1
Unilateral Facial Paralysis.....	2	Dementia.....	1
Paralysis Agitans.....	2	Concussion of Brain.....	1
Hemiplegia.....	1	Acute Anterior Poliomyelitis.....	1
Neurasthenia.....	8	Trigeminal Neuralgia.....	1
Brachial Paralysis.....	1	Incomplete Diagnosis.....	7
Pressure Paralysis.....	1		
Ophthalmoplegia.....	1		
			48

### Orthopedic Clinic.

Report of Cases from April 30, 1898, to April 30, 1899.

PROF. HARRY M. SHERMAN.

CHIEFS OF CLINIC: DRs. SAMUEL J. HUNKIN AND HENRY DU R. PHELAN.  
ASSISTANTS: DRs. JOHN J. FLOOD AND ELEANOR M. STOW.

	New Cases.	Cases Continued From Last Year.	Total Number of Cases Treated.	Under 3 Years of Age.	From 3 yrs. to 10 yrs.	From 10 yrs. to 20 yrs.	Over 20 Years.	Discharged Cured.	Discharged Relieved.	Referred or Sent to Children's Hospital.	Not Treated.	Died.	Cases Continued.
Vertebral Tuberculosis.....	15	18	33	4	21	6	2	2	6	4	21		
Hip Joint Tuberculosis.....	10	18	28	2	14	11	1	4	1	8	4	15	
Knee Joint Tuberculosis.....	8	7	15	9	6	3	1	3	1	3	1	1	
Ankle Joint Tuberculosis.....	4	4	8	2	1	1	2	1	1	1	1	1	
Shoulder Joint Tuberculosis.....	1	1	2	1	1	1	1	1	1	1	1	1	
Wrist Joint Tuberculosis.....	2	2	4	1	1	1	1	1	1	1	1	1	
Antero-Polio-Myelitis.....	4	2	6	2	3	1	4	4	4	4	4	4	
Spastic Paralysis.....	1	1	2	2	2	2	2	2	2	2	2	2	
Scoliosis.....	5	1	6	1	5	5	5	5	5	5	5	5	
Torticollis.....	2	2	4	1	1	2	2	2	2	2	2	2	
Genu Valgum.....	5	3	8	1	4	3	4	4	4	4	4	4	
Rachitic Deformities of Legs.....	3	1	4	2	1	1	1	1	1	1	1	1	
Talipes Equino Varus.....	6	2	8	2	4	2	1	1	2	2	2	2	
Talipes Valgus.....	5	3	8	1	4	3	4	4	4	4	4	4	
Congenital Dislocation of Hips.....	5	5	10	5	5	5	5	5	5	5	5	5	
Miscellaneous.....	11	3	14	2	3	5	4	3	1	6	4	4	
	87	59	146	15	68	45	18	19	14	24	25	1	72

## LABORATORY OF CLINICAL MICROSCOPY.

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During the past year regular courses have been given in clinical microscopy. These have included examination of the blood by the latest methods, examinations of sputum, urine, transudates, exudates, semen, vaginal and urethral discharges, milk, material from throat for diphtheria bacilli, gastric contents, feces, etc.

The following examinations have been made for the clinicians during the past year:

Examination of Urine.....	640	Examination, Cultural.....	27
" Sputum.....	177	" of Semen.....	5
" Morbid Growths..	46	Examination of Hair and Skin	
" Blood.....	63	Scrapings.....	21
" Gastric Contents..	19	Examination of Pus.....	24
" Feces.....	5	" Trichinous Pork..	1
" Urethral Disch'ge	60		
" Vaginal Disch'ge	54		1153
" Milk.....	11		

H. A. L. RYFKOGEL, M. D., Director.

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## MUSEUM

During the past year about fifty new specimens have been added to the collection in the museum. By the beginning of the following college year, the specimens at present on hand will be completely arranged and indexed by means of an index catalogue system to which students will have access a certain number of days a week.

H. A. L. RYFKOGEL, M. D., Assistant Curator.



## TEXT-BOOKS AND BOOKS OF REFERENCE

---

- ANATOMY.**—Gray (13th Ed.), Clark and Lockwood's Dissector, Holden, Treves' Applied Anatomy. Reference: Morris, Quain, Weisse, Macalister.
- PHYSIOLOGY.**—Foster, American Text-book of Physiology.
- HISTOLOGY.**—Stoehr, Schaeffer, Stirling, Piersol. Reference: Koelliker, Toldt.
- CHEMISTRY.**—Luff's Manual of Chemistry, Witthaus' Laboratory Manual, Richter's Organic Chemistry. Reference: Remsen's Advanced Inorganic Chemistry, Pellet's Medical and Physical Chemistry.
- PHYSICS.**—Daniell's Medical Physics.
- MATERIA MEDICA.**—Butler's Materia Medica, White's Materia Medica, U. S. Dispensatory.
- PATHOLOGY.**—Ziegler (Trans. from 8th German Ed.) Delafield-Prudden, Gibbes. Reference: Birch-Hirschfeld, Klebs.
- THERAPEUTICS.**—Hare, Shoemaker's Materia Medica and Therapeutics. Reference: Bartholow, Brunton, Wood, Ringer, Edes.
- HYGIENE AND MEDICAL JURISPRUDENCE.**—The Students' Hand-book of Forensic Medicine and Medical Police, Husband; Practical Hygiene, Parkes; Manual of Medical Jurisprudence, Taylor.
- PRACTICE OF MEDICINE.**—Osler, Tyson, Wood and Fitz, Lockwood, Anders. Reference: American System of Practical Medicine, Twentieth Century Practice.
- CLINICAL MEDICINE.**—Da Costa, Flint, Purdy's Practical Urinalysis, Hare's Diagnosis.
- SURGERY.**—Walsham, Ashhurst, Treves' System. Reference: Erichsen and Senn, Park's Surgery by American Authors.
- OBSTETRICS.**—American System of Obstetrics; Practical Obstetrics by Grandin and Jarman; Playfair; Lusk.
- GYNECOLOGY.**—Clinical Gynecology by Keating and Coe; American Text-book of Gynecology.
- NERVOUS DISEASES.**—Gray. Reference: Gowers, Hamilton, Dana, Strumpell.
- MENTAL DISEASES.**—Gray. Reference: Spitzka, Clouston, Maudsley, Bucknall and Tuke.
- OPHTHALMOLOGY.**—Swanzy. Reference: Noyes.
- OTOLOGY.**—Roosa. Reference: Gruber.
- RHINOSCOPY AND LARYNGOLOGY.**—Bosworth. Reference: Burnett's System.
- DISEASES OF THE SKIN.**—Jackson. Reference: Diseases of the Skin, Radcliffe-Crocker.
- PEDIATRICS.**—L. Emmett Holt, Lewis Smith, Goodhardt.
- TOXICOLOGY.**—Blyth on Poisons.
- URINE ANALYSIS.**—The Urine in Health and Disease, Black.
- PRESCRIPTION WRITING.**—Thornton's Manual.
- DICTIONARY, MEDICAL.**—Dunglison.

## GRADUATES, 1899

Samuel Richard Arthur.....	Stockton, California
Rachel Leona Ash, B. S.....	San Francisco, California
Thomas James Clark.....	Gilroy, California
John Adams Colliver, A. B.....	San Bernardino, California
Edgar Meyer Dinkelspiel, Ph. B.....	San Francisco, California
George Elliott Ebright.....	Millbrae, California
Mark Lewis Emerson.....	Mountain View, California
Milton Washington Franklin.....	San Francisco, California
Donald Jackson Frick.....	Los Angeles, California
Samuel James Gardner.....	San Francisco, California
Allen Francis Gillihan.....	Berkeley, California
Harrington Bidwell Graham, B. S.....	Chico, California
Walter Joseph Henesey.....	Sacramento, California
Paul Ruhnke Lanz.....	Oakland, California
Robert Thomas Legge, Ph. G.....	San Francisco, California
Charles Forester Millar.....	Dixon, California
Bernard Francis McElroy, A. B.....	Oakland, California
Silvio Joseph Onesti, Ph. G.....	San Francisco, California
Saxton Temple Pope.....	Angel Island, California
Vida Redington, B. S.....	Oakland, California
Edward James Rice.....	Oakland, California
William Emerson Stevens.....	San Francisco, California
George Lawrence Stevenson, A. B.....	Pittsburg, Pennsylvania
James Edward Taylor, B. S.....	Weaverville, California
Oscar Nettleton Taylor, A. B.....	Belmont, California
Gustavus Adolphus Weyer, D. D. S.....	Modesto, California
Emma Wightman.....	San Francisco, California
William Patten Willard.....	Oakland, California

## MATRICULANTS, 1898-1899

Harry Everett Alderson.....	San Francisco, California
Edgar Allen Arthur.....	Stockton, California
Samuel Richard Arthur.....	Stockton, California
Rachel Leona Ash, B. S.....	San Francisco, California
† Joseph Leol Azevedo, B. S.....	Sacramento, California
David Eugene Bacigalupi.....	San Francisco, California
Benjamin Bakewell, B. S.....	Oakland, California
William Baumgarten, Ph. G.....	Tehama, California
† Ignatz Beck, Ph. G.....	San Francisco, California
Wilfred Penton Beerman, Ph. G.....	San Francisco, California
Philip August Bill.....	San Francisco, California
David William Brown.....	Clements, California

† Not in attendance.

Robert Edward Braden.....	Centerville, California
Emma Buckley.....	San Jose, California
†Filiberto Everado Cadena.....	San Francisco, California
William Charles Chilson.....	Fallbrook, California
Thomas James Clark.....	Gilroy, California
John Adams Colliver, B. A.....	San Bernardino, California
James Warren Conlin.....	San Francisco, California
Millicent Mary Augusta Cosgrave.....	San Francisco, California
Emma Fielding Daniel, B. S.....	San Francisco, California
Marguerite Deininger.....	Alameda, California
Walter Murray Dickie, Ph. B.....	Riverside, California
Edgar Meyer Dinkelspiel, Ph. B.....	San Francisco, California
John Gapen Donaldson, Ph. G.....	Oakland, California
Dora Ida Dorn.....	San Francisco, California
Ernestine May Doychert.....	San Francisco, California
Ralph Orland Dresser.....	Paso Robles, California
George Elliott Ebright.....	Millbrae, California
Mark Lewis Emerson.....	Mountain View, California
May Charlotte Faas.....	San Francisco, California
Edgar James Farrow.....	San Francisco, California
Manuel Fernandez.....	Pinole, California
John Nivison Force, B. S.....	Berkeley, California
Ernest Charles Foster.....	Oakland, California
Milton Washington Franklin.....	San Francisco, California
Donald Jackson Frick.....	Los Angeles, California
Samuel James Gardner.....	San Francisco, California
Allen Francis Gillihan.....	Berkeley, California
Charles Raymond Gleason.....	San Leandro, California
†Antonio Francis Gonzales.....	San Francisco, California
Harrington Bidwell Graham, B. S.....	Berkeley, California
†Antonio Angelo Guatelli.....	San Mateo, California
William Harvey.....	San Francisco, California
Frank Revere Henderson.....	Merced, California
Walter Joseph Henesey.....	Sacramento, California
Blanche Van Heusen.....	Sacramento, California
Reuben Chandler Hill.....	Berkeley, California
Harold Phillips Hill, B. A.....	Redlands, California
*Alexander Felix Holland.....	
Rutherford Buchard Irones.....	San Francisco, California
Madeline E. Johns.....	San Francisco, California
Elizabeth Frances Joyce.....	San Francisco, California
Georges Juilly, B. S.....	San Francisco, California
Daniel William Kamp.....	Petaluma, California

† Not in attendance.

\* Deceased.

Francis Bailey Kane.....	San Francisco, California
Mary Frances Kavanagh.....	Vallejo, California
†Emmet Carlin Keane.....	San Francisco, California
Bernard John Klotz.....	Vallejo, California
Ostroilo Stanislaus Kucich.....	San Francisco, California
Samuel Walter Ross Langdon, Jr., B. A.....	Stockton, California
Paul Ruhnke Lanz.....	Oakland, California
Julia Pauline Larson.....	Council Bluffs, Iowa
Clyde Briggs Laughlin.....	Santa Rosa, California
Adelebert Watts Lee.....	Carson City, Nevada
Robert Thomas Legge, Ph.G.....	San Francisco, California
John Herbert Leimbach.....	Sacramento, California
†Charles Fisher Lemmon, D. D. S.....	San Francisco, California
Birney Alexander Lendrum.....	San Jose, California
Milton Byrne Lennon, A. M.....	San Francisco, California
John Vaughan Leonard.....	San Francisco, California
William Kinkade Lindsay, Jr.....	Sacramento, California
Rudolph Ignatius Longabaugh.....	San Francisco, California
†William Jay Loveland, Ph. G.....	San Francisco, California
Robert Hansen Madsen, B. A.....	Palo Alto, California
Thomas Michael Maguire, B. A.....	San Francisco, California
Ergo Alexander Majors.....	Alameda, California
George Jewett McChesney, B. A.....	Oakland, California
Florence McCoy, B. S.....	Oakland, California
Bernard Francis McElroy, B. A.....	Oakland, California
Arthur Thomas McGinty.....	San Francisco, California
William Garrett McGuire.....	Sacramento, California
Arthur Merrill McIntosh.....	Lovelock, Nevada
William Joseph McKinley.....	Forest Hill, California
Thomas Reid McNab.....	Riverside, California
William Fletcher McNutt, Jr., B. S.....	San Francisco, California
Joseph Frank Meagher, B. A.....	San Francisco, California
Caroline Stow Merwin.....	Oakland, California
John Herman Meyer.....	San Bernardino, California
Charles Forester Millar.....	Dixon, California
Mark Leonard Miner.....	Berkeley, California
Tadataro Miyabe.....	Japan
William George Moore.....	Healdsburg, California
Frederic Lincoln Morong.....	San Francisco, California
Dan Hazen Moulton.....	Oakland, California
William James Murphy.....	San Francisco, California
John Crockett Newton, Ph. G.....	San Francisco, California
May Elizabeth Nolan.....	Oakland, California
James Ignatius O'Dea, B. A.....	San Francisco, California

† Not in attendance.

Slvio Joseph Onesti, Ph. G.....	San Francisco, California
Peter Opawig, B. A.....	San Francisco, California
†Parson Hoag Parkhurst.....	Berkeley, California
Harry Elwin Piper.....	Santa Cruz, California
Saxton Temple Pope.....	Angel Island, California
†Jesse Ransom Powell.....	Healdsburg, California
Matthew Denis Pratt.....	Napa, California
James Fowler Pressley.....	Santa Rosa, California
George Phillip Purlenky, Ph. G.....	San Francisco, California
Vida Redington, B. S.....	San Francisco, California
Eugene Crowell Reilly, Ph. G.....	Oakland, California
George Frederick Reinhardt, B. S.....	Berkeley, California
Edward James Rice.....	San Francisco, California
Romeo Richmond Root.....	Tempe, Arizona
†Carrie Rosenberg.....	San Francisco, California
Albert Rosenow.....	San Francisco, California
Raymond John Russ, B. S.....	Oakland, California
Louis Victor Saph, B. L.....	San Jose, California
Spiro Sargentich, Ph. B.....	Montenegro
Lionel Samuel Schmitt.....	San Francisco, California
James Walter Seawell.....	Healdsburg, California
Kaname Shimada.....	Japan
Haydn Mozart Simmons, Ph. G.....	San Francisco, California
Frank William Simpson.....	Berkeley, California
Hudson Smythe.....	Stockton, California
†Peter John Sorocco, B. S.....	Oakland, California
David Stafford.....	Redwood, California
William Emerson Stevens.....	San Francisco, California
George Lawrence Stevenson, B. A.....	Pittsburg, Pennsylvania
John Francis Sullivan, B. S.....	San Francisco, California
George Joseph Sweeney.....	Petaluma, California
George William Sweetser, Ph. G.....	San Francisco, California
Fred Hugh Van Tassel.....	Glendora, California
James Edward Taylor, B. S.....	Weaverville, California
Oscar Nettleton Taylor, B. A.....	Belmont, California
Leon Walter Teaby.....	Geyserville, California
Fred Henry Tebbe.....	San Francisco, California
Benjamin Thomas, A. M.....	Palo Alto, California
Edward Topham.....	Milpitas, California
Lewis Lea Thompson.....	Gridley, California
Joseph Michael Toner.....	San Francisco, California
Theodora Elliott Vassault.....	San Francisco, California
Herbert Charles Watts.....	San Francisco, California

† Not in attendance.

Emmet Leroy Wemple, Jr.....	San Francisco, California
Gustavus Adolphus Weyer, D. D. S.....	Modesto, California
† John Lyxander White.....	Sacramento, California
Emma Wightman.....	San Francisco, California
Edwin Milton Wilder, B. L.....	Oakland, California
William Patten Willard.....	Oakland, California
Chester Howard Woolsey, B. S.....	Berkeley, California
Una Yone Yanagisawa, B. L.....	Japan

† Not in attendance.

## COMPLETE LIST OF GRADUATES

Abraham, Henry, D. D. S.....	1898	Booth, John Richard.....	1894
Addington, D. M.....	1879	Borchers, Bertha, B. L.....	1897
Adelung, Edw. von, Jr., B.S.....	1892	Bordé, Henry J.....	1883
Aird, John W.....	1893	Botsford, Mary E.....	1898
Alexander, Monroe E.....	1888	Boyes, Wm. J. R.....	1896
Allen, Clifford E.....	1896	Bradbury, George F.....	1876
Allen, Edward O.....	1875	Brannan, J. J.....	1876
Anderson, Helen O.....	1896	Brierly, Conant B.....	1876
Anderson, J. A.....	1873	Bromly, R. L.....	1882
Anderson, Winslow.....	1884	Broughton, Geo. A.....	1896
Armistead, Cecil M.....	1896	Brown, Ernest S.....	1886
Armistead, Howell V.....	1885	Brown, Geo. J.....	1876
Arthur, Samuel Richard.....	1899	Browne, Augustus F.....	1895
Ash, Rachel Leona, B. S.....	1899	Bruguiere, Peder Sather.....	1898
Bacigalupi, Louis D.....	1896	Bruns, W. C.....	1878
Badilla, Jose Crisanto.....	1895	Buckley, Vincent P.....	1884
Baker, Henry A.....	1891	Bunker, Robert E.....	1889
Baldwin, Robert O.....	1885	Bunnell, Edwin, A. B.....	1894
Barbat, John H., Ph. G.....	1888	Burchard, L. S.....	1882
Barbat, William B. F.....	1895	Burnham, Clark J.....	1891
Barber, Edward T.....	1866	Burnham, William P.....	1896
Bartlett, Cosam Julian.....	1898	Bussenius, L. M. (D'Ancona).....	1892
Bates, Charles B.....	1868	Cadwallader, Rawlins, A. M.....	1893
Bates, Walter E.....	1881	Cagliari, Guido E., B. S.....	1892
Beardale, E. M.....	1881	Cairns, John C.....	1876
Beaumeister, B. H.....	1882	Calbreath, John F.....	1875
Beck, Henry M.....	1896	*Caldwell, H. H.....	1880
Beede, Wm. M. S.....	1884	Caldwell, Robert.....	1869
Bell, William Lisle.....	1898	Callaghan, D. T.....	1873
*Benedict, C. W.....	1875	Callaway, Edwin.....	1898
Berndt, Richard M. H.....	1893	Cameron, Howard McD.....	1896
*Bettleheim, A. F.....	1880	Cameron, James S.....	1868
Biggs, F. P.....	1874	Chace, Wm. D'A.....	1896
Biggs, M. H.....	1870	*Chaigneau, V. A.....	1876
*Blake, Chas. M.....	1876	Churchill, Leonard.....	1871
Blake, Charles R.....	1891	Chalmers, Wm. P.....	1886
*Blake, James W.....	1874	Clark, George Waverley.....	1894
Blum, Sanford.....	1896	Clark, J. J.....	1869
Bond, Fred. T., Ph. G.....	1890	Clark, Thomas James.....	1899

\* Deceased.

Clark, Wm. D.....	1884	Estes, Melvin B.....	1888
Cleary, Stephen, Ph. G.....	1894	Evans, C. W.....	1881
Clinton, C. A.....	1881	Falck, Millicent E.....	1893
Cluness, Wm. R., Jr.....	1887	Feder, Adelina M.....	1895
Cochran, W. A.....	1869	Feder, Grace.....	1896
Coe, Leonard H.....	1896	Felt, Rae.....	1890
*Collins, Addison C.....	1885	Fenn, C. N.....	1865
Collischonn, Philip.....	1891	Fine, Andrew.....	1866
Colliver, John Adams, A. B.....	1899	Fine, Henry M.....	1898
Conlan, Wm. H.....	1886	Fitzgibbon, Frank Timothy.....	1894
*Connolly, John J.....	1878	Fleming, Bartholomew F.....	1893
Connolly, Thos. E.....	1884	Flesher, Frederick C. G.....	1893
Conrad, David A.....	1893	Flood, John J.....	1895
Cook, Frank S.....	1887	*Foote, Gilbert.....	1879
*Corbett, S. J.....	1868	Ford, Campbell.....	1891
Cothran, A. Lincoln.....	1893	Foreman, Francesca I.....	1889
Cox, Rosamond L.....	1888	Fottrell, Michael J.....	1887
Cox, Thomas F.....	1896	*Foulkes, J. F., Jr.....	1880
*Cox, Thos. H.....	1873	Franklin, Milton Washington.....	1899
Crees, Robert.....	1894	Fraser, S. J., A. B.....	1892
Crook, Emma (McKay).....	1892	Freeman, Charles Henry.....	1894
Crowley, Thomas J., Ph. G.....	1898	Freeman, Ernest M., A. B.....	1893
Curl, Holton C.....	1897	Frick, Donald Jackson.....	1899
Curran, Mary K. (Brandegge).....	1878	Frick, Ruclid B.....	1888
Damour, Ferdinand.....	1864	Frost, James.....	1877
D'Ancona, Arnold A., A. B.....	1884	Gale, Herbert A.....	1879
Davidson, Joseph R.....	1875	Gall, Alexander M.....	1893
Davie, J. C., Jr.....	1864	Gallwey, John.....	1885
*Dawson, Alson.....	1875	Gardner, Samuel James.....	1899
Day, John G.....	1884	Gates, Frank H.....	1884
Dean, Andrew J.....	1881	Giannini, Attilio H., A. B.....	1896
Delmont, Francis.....	1874	Gilham, G. W.....	1881
*Dennis, Nathan P.....	1888	Gillihan, Allen Francis.....	1899
DePuy, Anson A.....	1881	Giroux, Edward D.....	1898
DePuy, Edward Spence.....	1894	Glaze, George I.....	1887
Dickerson, Clarence Fitzhugh.....	1894	Gleaves, Christopher C.....	1889
Dinkelspiel, Edgar M., Ph. B.....	1899	Glover, Cosmos A.....	1893
Dodge, H. Washington.....	1884	Graham, Harrington B., B. S.....	1899
*Downs, George W.....	1879	Grattan, E. L.....	1881
Drinkhouse, E. J. C.....	1865	Gray, Robt. F., D. D. S.....	1895
Driacoll, Edward P., Ph. G.....	1891	Greth, August.....	1894
*Dubois, A. L.....	1864	Gros, Edward.....	1865
Dudley, Frank W.....	1895	*Guilemard, A. J.....	1878
Duffy, Geo. W.....	1898	*Hackett, John.....	1869
Dunbar, Arthur W.....	1891	Haile, C. S.....	1867
*Duncan, S. C.....	1877	*Hampton, James E.....	1871
Dunn, James P. H., S. B.....	1888	*Handy, J. C.....	1864
Dunn, William D., B. Sc.....	1897	Hansen, Thomas C.....	1867
Easton, Daniel E. F.....	1895	Happersberger, Albert K., A. B.....	1888
EBright, George Elliott.....	1899	Harmon, R.....	1879
*Emerson, Horatio B., Ph. G.....	1895	Harrigan, Jos. T.....	1896
Emerson, Mark Lewis.....	1899	Harris, Thomas W.....	1875
*Enright, Chas. M., A. B.....	1884	Haskins, Wm. H.....	1889
Eppinger, Rose (Sharp).....	1895	Hawkins, Wm. J.....	1890

\* Deceased.

Hay, Wm. G.....	1895	LeFevre, J. P.....	1881
Heavitt, Granville.....	1866	Legge, Robert Thomas, Ph. G.....	1899
Henesey, Walter Joseph.....	1899	Leland, Thomas B. W.....	1894
Heinemann, J. M.....	1877	*Lewitt, F. A.....	1878
Heller, Clarence L.....	1895	*Lindenberg, W. H.....	1876
Helms, Geo. L.....	1895	Linforth, Grace S.....	1898
Hickey, Thomas A.....	1897	Lingo, Marin B.....	1866
*Hicks, Young E.....	1874	Lougo, Emil F.....	1883
Hill, Edward John.....	1894	Lord, Franklin F.....	1880
Hill, Howard S.....	1898	Lowett, Wm. B.....	1883
*Hodgdon, W. H. A.....	1876	Lowe, Fred. W.....	1892
Holmes, Edw. R.....	1889	Lucchetti, Victor F., Ph. G.....	1898
Holmes, Thomas Blakeney.....	1894	*Lundborg, Gustaf W.....	1883
*Hook, Walter E.....	1879	Lustig, Daniel D., Ph. G.....	1885
Hopkins, Edw. K.....	1895	Lutz, Frederick A.....	1895
Hopkins, T. P.....	1880	*Lyford, L. Dexter.....	1872
Horton, E. Shelton.....	1893	MacCallum, Hammond J.....	1895
Howard, Katherine I.....	1885	Macdonald, James M.....	1891
Howard, Wm. D.....	1887	MacInnis, Martin B.....	1894
Howell, H. H.....	1879	Mackenzie, J. H.....	1870
Hughes, Jerome A.....	1883	Maguire, Charles S., B. S.....	1893
*Hughes, L. J.....	1879	Maher, Thomas D., B. Sc.....	1886
Hull, James P.....	1895	Maloon, Clarence La F., B. Sc.....	1896
Hulse, Clarence H.....	1893	Mann, Chas. S.....	1890
Hunkin, Sam. J.....	1890	Martineau, E. D.....	1873
Huntington, Samuel D., B. A.....	1897	*Martinez, John M.....	1890
Hyde, George E.....	1895	Marx, Frances R (Greene).....	1889
Johnstone, A.....	1879	Mason, Benjamin F.....	1875
Johnstone, Ernest K.....	1892	Mather, Squire R.....	1889
Jones, Ottiwell W.....	1889	Matthewson, J. M.....	1882
Joseph, Simon E.....	1877	Mayer, Oscar J., Ph. G.....	1889
Judell, Malvina I.....	1898	Mays, Arthur H.....	1887
Katsuki, Ichitaro.....	1896	Mays, William H.....	1873
Kawakami, Masayasu.....	1889	McCarthy, Charles F.....	1893
Keane, George B.....	1875	McColl, G. F.....	1877
Keenan, Alex S.....	1898	McCone, Jas. F., B. S.....	1892
Kellogg, Wilfred H., Ph. G.....	1896	McCormack, Herbert F., A. B.....	1876
Kearney, Jas. F.....	1896	*McCoy, Juan W.....	1884
Kelly, John L.....	1884	McCulloch, Thomas A.....	1895
Kingale, Thomas H.....	1886	McCullough, Frank E.....	1894
*Kirby, William T.....	1891	McDermott, Wm. P.....	1874
Kirchhoffer, Frederick.....	1887	McDonald, J. J.....	1877
*Kirpatrick, C. A.....	1871	McElroy, Bernard F., A. B.....	1899
Kirkwood, J. W.....	1876	McGettigan, Chas. D., A. B.....	1896
Kobayashi, Sankio.....	1887	*McGuire, Lucius.....	1868
Kosbue, A. Emil.....	1875	McKnight, Nellie M.....	1894
Kugeler, Henry, B. A.....	1890	McLaughlin, M. A.....	1878
Kurtz, Joseph.....	1875	McLaughlin, Alfred.....	1896
Lagan, Edward.....	1891	*McLean, John T.....	1887
Lagan, Hugh.....	1893	McLean, Murdoch.....	1897
Lanz, Paul Ruhnke.....	1899	McLean, Robert A.....	1874
Lartigan, August L. J.....	1896	McMahon, Frank A.....	1897
Laidlaw, Horace.....	1880	McMurdo, John R., Ph. G.....	1891
Lee, Arthur S.....	1896	Menefee, Joseph S.....	1898

\* Deceased.



Mervy, Emile C.....	1883	Pawlicki, Casimir F., B. Sc.....	1894
Merritt, G. W.....	1882	Payne, J. R.....	1882
Meyer, Albert G.....	1890	Perrault, Edward L.....	1885
Meyers, R. C.....	1880	Pescia, Joseph.....	1877
Millar, Charles Forester.....	1899	Petrie, Frank B., Ph. G.....	1891
Miller, Chas. F.....	1874	Phelan, Henry du R.....	1893
Miller, John A.....	1875	Plant, Benj. A.....	1886
Milton, Joseph L.....	1891	*Plummer, Richard H.....	1866
Minor, John F.....	1876	Pond, Gardner P.....	1895
Mohun, Chas. C., Ph. G.....	1890	Pond, Henry M.....	1880
Moloney, James John, Ph. G.....	1891	Pond, M. B.....	1864
Moody, Mary W.....	1882	Pope, Horace E.....	1876
Morgan, Chas. L., A. B., Ph. G.....	1896	Pope, Saxton Temple.....	1899
Morgan, F. F.....	1881	Powell, J. M.....	1876
Morrill, Augustus L.....	1887	Pressley, J. B.....	1882
Morrissey, Joseph Grant.....	1894	*Prevost, J. Renny.....	1866
Morrison, Mary E.....	1894	*Prutt, J. A.....	1878
Morrow, Howard.....	1896	Putnam, Victor E.....	1896
Morse, Fred. W.....	1891	*Quinlan, Albert P.....	1876
*Muenter, Henry.....	1882	Rantz, Stephen H.....	1893
Muller, H. E.....	1880	Rathbun, Geo. T.....	1892
Müller, Friedrich C.....	1898	Reardan, T. B.....	1882
Murphy, James D.....	1896	*Reardon, Wm. E.....	1887
Muscott, Brayton.....	1896	Redington, Vida, B. S.....	1899
Nast, J. E.....	1895	Reed, Clarence E.....	1883
Nelson, John A.....	1892	*Reich, George A.....	1877
Newman, Alfred A. B.....	1896	Reith, Fenelon M.....	1894
*Newmark, Valentine.....	1868	Reynolds, George E.....	1877
Nichols, Theodore A.....	1885	Rice, Edward James.....	1899
Noble, John A.....	1888	Richardson, J. A.....	1866
Noble, Mary L.....	1896	Riley, J. S.....	1883
Nottage, George E.....	1874	Rinne, Frederick A.....	1895
Nuttall, George H. F.....	1884	Robertson, John W.....	1880
O'Brien, Aloysius P.....	1889	*Robinson, Luke.....	1867
O'Brien, John Henry.....	1896	Roche, Thos. B., Ph. G.....	1898
O'Brien, John Thomas.....	1896	Rochex, Joseph.....	1896
Ogdon, Geo. W.....	1892	Root, Corydon B., D. D. S.....	1894
Oldenbourg, Louise A.....	1897	Rorke, James.....	1876
Olds, Wm. H.....	1881	Rucker, H. N.....	1870
Oliver, Joseph A.....	1889	*Rupe, Samuel H.....	1868
Olsen, Marie C. (Sommerfeldt).....	1891	Ryer, Marshall B.....	1896
O'Malley, Wm. H. I.....	1896	Ryfkogel, Henry A. L.....	1894
*O'Neill, A. A.....	1867	Sabey, L. A.....	1880
*O'Neill, J. C.....	1873	Sage, H. T.....	1878
Onesti, Silvio Joseph, Ph. G.....	1899	Sanborn, Franklin H.....	1892
Orr, Robert H.....	1896	Sanborn, William K., Ph. G.....	1893
Oser, Chas.....	1878	Sankey, Mary J.....	1895
*Oviedo, Louis P., A. B.....	1891	Sawyer, H. C.....	1881
Painter, Geo. L., Ph. G.....	1896	Schmels, Charles J., Ph. G.....	1895
Park, Theorilda C.....	1887	Schnabel, Martin.....	1873
Parkman, Wallace E.....	1896	Scholl, Albert J.....	1890
Patent, Herman.....	1884	Scholl, Albert L., Ph. G.....	1884
Paton, Chas. J.....	1883	Schrader, Sydney H.....	1883
Patterson, T. J.....	1882	Scott, Arthur W.....	1879

\* Deceased.

Scott, Florence.....	1896	Tevia, Henry L.....	1887
Seavey, L. T.....	1878	Thompson, James Goodwin.....	1894
Seawell, John I.....	1870	Thorpe, Lewis S.....	1896
Seawell, Thomas H.....	1876	Thrasher, Marion.....	1890
Selling, Nathalie.....	1894	Tiffany, Edward V.....	1894
*Sellon, Anna F.....	1881	Tillman, Frank J.....	1898
*Senter, Elizabeth S.....	1882	Tobriner, Oscar, D. D. S.....	1898
Shannon, James.....	1887	*Toland, Charles A.....	1869
Sharp, James Graham, D.D.S.....	1894	*Trafton, William A.....	1895
Sheets, John H.....	1881	Trask, Henry C., Ph. G.....	1896
Shellhouse, E. J.....	1875	Trevino, Alberto.....	1896
Shelton, Thomas W.....	1867	Trew, Niel C.....	1898
Sherman, Elenora S. (Yelland).....	1884	Tuggle, Samuel P.....	1889
Shuey, Sarah I.....	1878	*Turner, J. T.....	1869
Sichel, Gust. W.....	1876	Tuttle, H. P.....	1869
Sime, Neil A.....	1894	Urban, Kurt.....	1883
Simon, Grace.....	1893	Villain, Albert J., Ph. G.....	1895
Simon, Jules A.....	1875	Voigt, W. C.....	1879
*Sims, John Marion.....	1891	Von Buelow, F.....	1877
Smith, George S.....	1879	Wade, Mark S.....	1889
Smith, Harvey F.....	1894	Waller, Newton B.....	1896
Smith, T. H.....	1876	Walz, G.....	1868
Smith, Weston O.....	1891	Wanzer, L. M. F.....	1876
Smith, William P.....	1875	Warner, James Kyle.....	1891
Soboclay, Julius.....	1886	Watanabe, Tey.....	1887
Sparkes, Agnes.....	1879	*Waters, John W.....	1874
Spring, Charlotte B.....	1890	Wayson, James T.....	1891
Stafford, John T.....	1896	Webber, J. S.....	1869
*Stanton, James.....	1882	*Weeks, F. L.....	1864
Steely, John.....	1875	Weiss, E. M.....	1877
Stern, Arthur A., Ph. G.....	1896	Welch, W. P.....	1864
Stevens, William Emerson.....	1899	Weyer, Gustavus A., D. D. S.....	1899
Stevenson, G. Lawrence, A. B.....	1899	Wheaton, S. P.....	1877
Stevenson, J. R.....	1877	White, James T.....	1888
*Stewart, J. M.....	1882	*Whittell, A. P.....	1873
Stewart, Mary J.....	1896	Wickman, Wm. J.....	1883
Stirewalt, Henry W.....	1894	Wightman, Emma.....	1899
*Stivers, C. A.....	1864	*Widney, J. P.....	1867
Stone, Bertram.....	1895	Wilcox, Wilber J.....	1885
Stone, Mack V.....	1896	Wilkes, Farrington.....	1894
Stover, Wm. M.....	1896	Willard, William Patten.....	1899
Stow, Eleanor M.....	1896	Williams, Robert B.....	1887
*Summers, G. M.....	1876	Williamson, John M.....	1885
Summers, John F.....	1878	Williamson, W. T.....	1877
Surryhne, Benj. F.....	1890	Wilson, Kemlo R. McD.....	1886
Sutherland, Robert L.....	1892	Winton, Henry N.....	1885
Sutro, Emma L. (Merritt).....	1881	Woods, W. E. Josephine.....	1885
Swann, Charles M.....	1875	*Wooster, David.....	1885
Swisher, J. R.....	1877	Wright, Henry E.....	1894
Tartar, A. P.....	1882	Young, Junius D.....	1881
Taylor, Edward R.....	1865	Younger, Alex. J.....	1869
Taylor, James Edward, B. S.....	1899	Younger, Edward A.....	1879
Taylor, Oscar Pettleton, A. B.....	1899	*Zeyn, Gustav C.....	1889
Terry, Wallace I, B. S.....	1882		
Total.....	509		

\* Deceased.

## THE ALUMNI ASSOCIATION

---

The Alumni Association of the Medical Department of the University of California now includes in its membership most of the graduates of the institution, and the officers for the ensuing year take pleasure in announcing a prosperous outlook for the Association.

The objects of the Society are the promotion of the prosperity of our *Alma Mater*, the maintenance and cultivation of fraternal feeling among the alumni, and the advancement of the interests of medical education and the diffusion of scientific knowledge.

Professors and Teachers in the Medical Department are entitled to honorary membership with an appropriate certificate.

The meetings during 1899-1900 will be held quarterly. At these meetings medical and scientific topics will be brought up for discussion, and all present asked to participate.

Papers and reports of special cases are solicited from members outside of the city or abroad.

All alumni are cordially invited to identify themselves with the Association and assist in the promotion of its welfare.

JAMES F. McCONE, M. D., President.

For further particulars address the Secretary of the Association,

ROSAMOND L. COX, M. D.,  
705 Sutter St., San Francisco, Cal.

*DRIVEWAY*

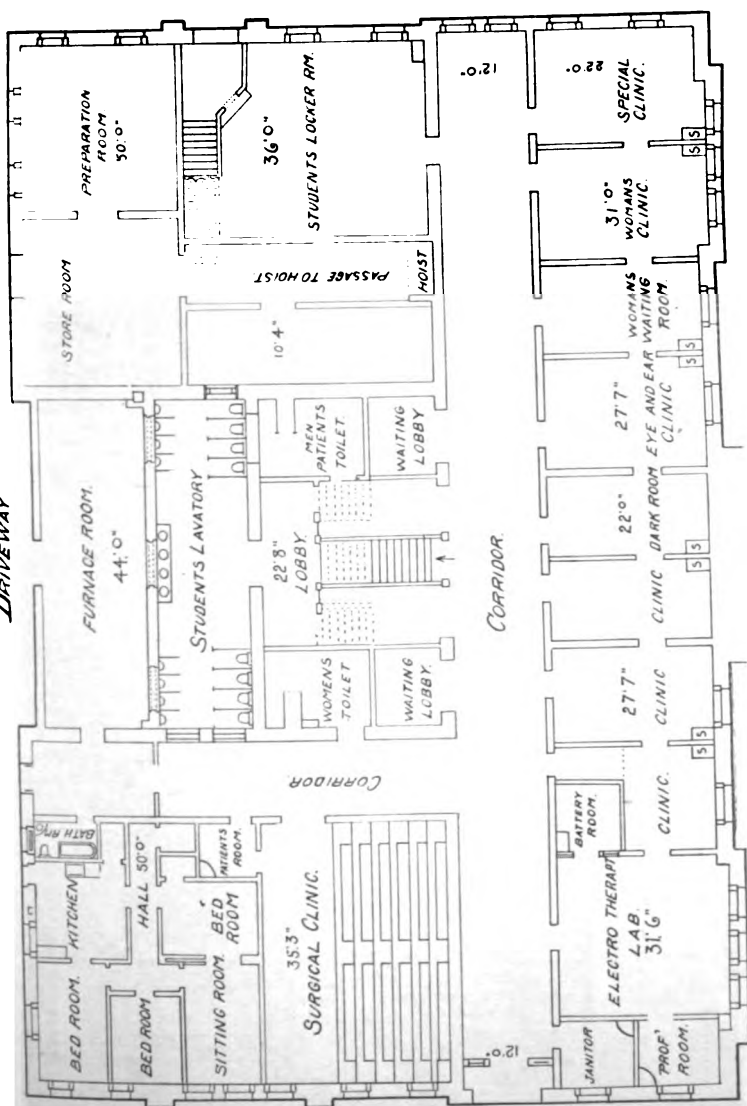


PLATE NO. 1.  
PLAN OF BASEMENT.

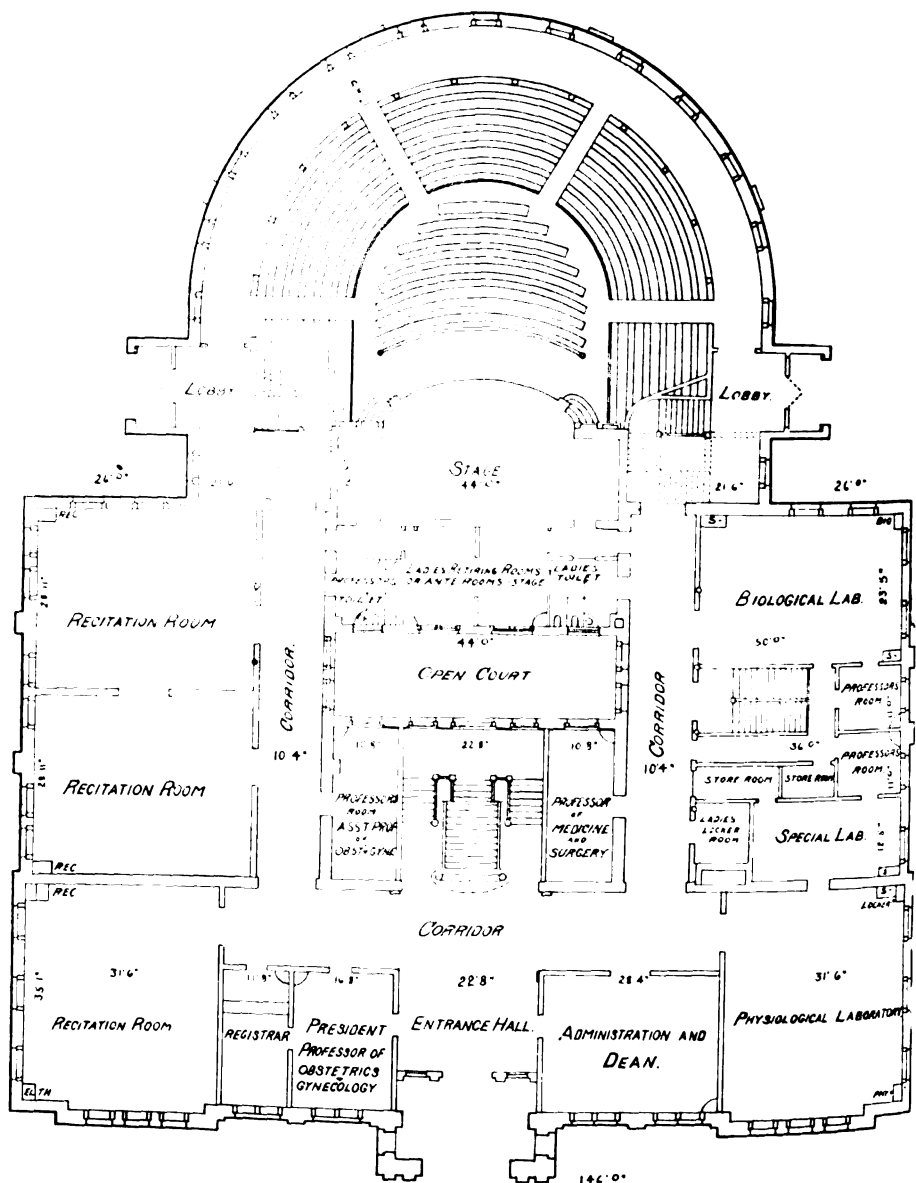


PLATE NO. II.  
PLAN OF FIRST FLOOR.

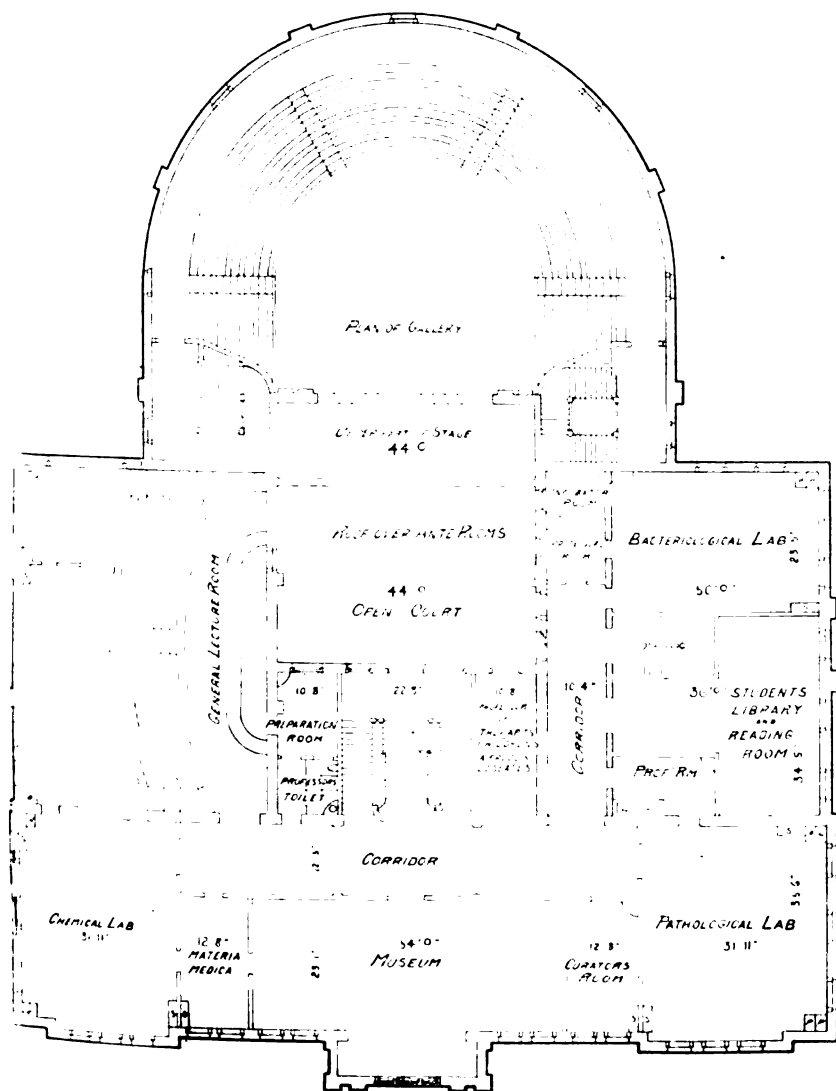


PLATE NO. III.  
PLAN OF SECOND FLOOR.

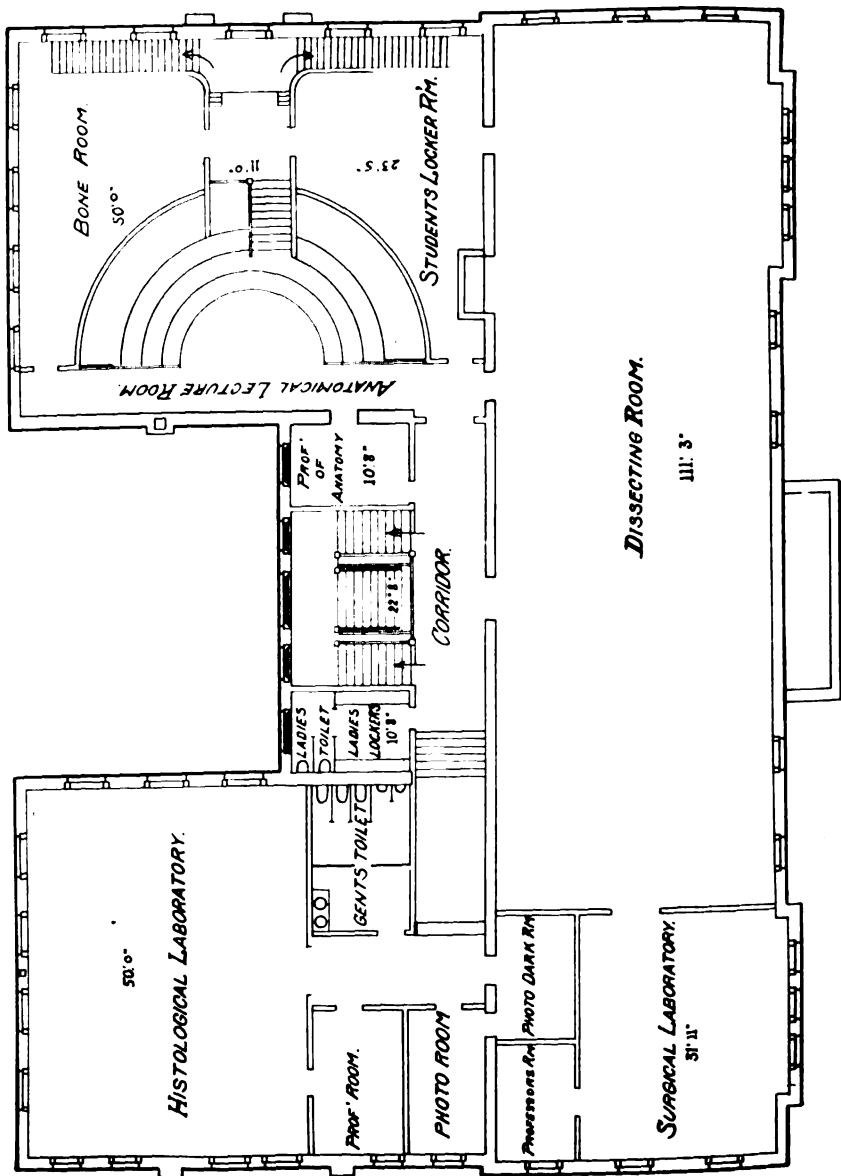
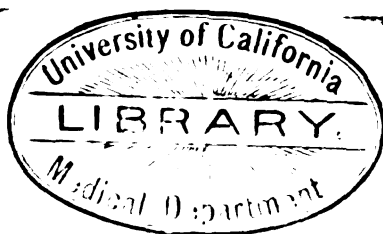
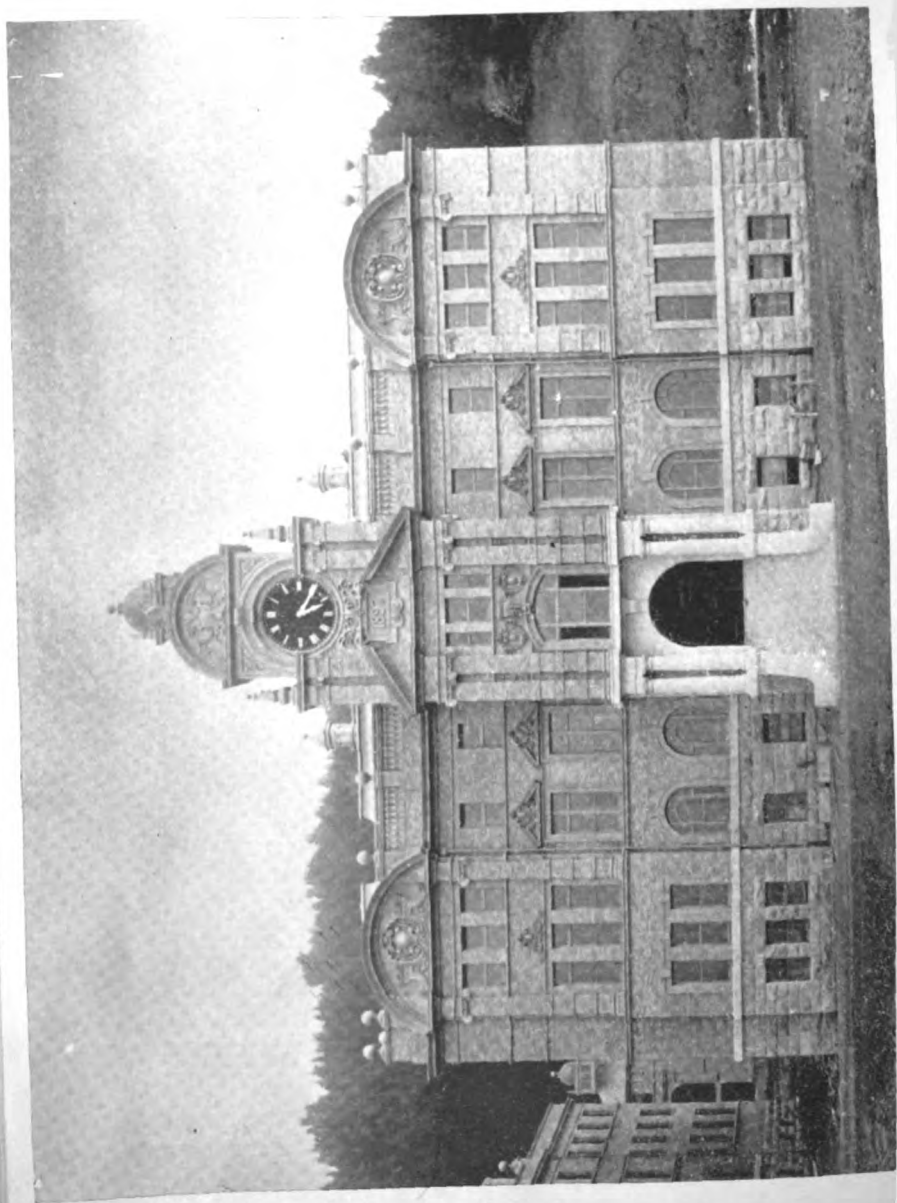


PLATE NO. IV.  
PLAN OF THIRD FLOOR.







**MEDICAL DEPARTMENT**

# **University of California**

**THIRTY-EIGHTH ANNUAL ANNOUNCEMENT**

**WITH**

**CATALOGUE OF STUDENTS AND GRADUATES**

**AND REPORTS OF HOSPITAL AND DISPENSARY CLINICS**

**1900-1901**

## CALENDAR FOR 1900-1.

---

THE TERM will open on Monday, September 3, 1900, and close on Tuesday, April 30, 1901.

THE MATRICULATION EXAMINATIONS will be held at Berkeley, August 13, 14, and 15, 1900.

THE EXAMINATIONS for promotion and the final examinations for graduation will begin Monday, April 29.

THE LABORATORY and LECTURE COURSES are given at the Affiliated Colleges Buildings south of the east end of Golden Gate Park.

THE CLINICAL LECTURES are delivered at the City and County Hospital, Twenty-second street and Potrero avenue.

THE DISPENSARY CLINICS are held at 155 New Montgomery street.

THE ANNUAL COMMENCEMENT for conferring the Degree of Doctor of Medicine is held in May.

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All communications should be addressed to

DR. A. A. D'ANCONA, Dean of the Faculty,  
1022 Sutter St , San Francisco, California.

# UNIVERSITY OF CALIFORNIA

## BOARD OF REGENTS

### Ex-Officio Regents.

HIS EXCELLENCY HENRY T. GAGE.....	SACRAMENTO
<i>Governor, ex-officio President of the Board.</i>	
HIS HONOR JACOB H. NEFF.....	SAN FRANCISCO
<i>Lieutenant-Governor.</i>	
HON. ALDEN ANDERSON.....	SUISUN
<i>Speaker of the Assembly.</i>	
HON. THOS. J. KIRK.....	SACRAMENTO
<i>State Superintendent of Public Instruction.</i>	
HON. ADOLPH SPRECKELS.....	SAN FRANCISCO
<i>President of the State Agricultural Society.</i>	
E. A. DENICKE, ESQ.....	SAN FRANCISCO
<i>President of the Mechanics' Institute.</i>	
BENJAMIN IDR WHEELER, Ph. D.....	BERKELEY
<i>President of the University.</i>	

### Appointed Regents.

The names are arranged in order of original accession to the Board.

NAME	ADDRESS	*TERM EXPIRES
†ANDREW S. HALLIDIE, ESQ.,	330 Market St., San Francisco,	1908
HON. WILLIAM T. WALLACE,	799 Van Ness Ave., San Francisco,	1902
ISAIAS WM. HELLMANN, ESQ.,	Nevada Bank, San Francisco,	1902
ARTHUR RODGERS, B. S., LL. B.,	309 Montgomery St., S. F.,	1906
†ALBERT MILLER, ESQ.,	cor. Annie & Stevenson Sts., S. F.,	1906
JAMES F. HOUGHTON, C. E.,	223 Mission St., San Francisco,	1904
CHESTER ROWELL, M. D.,	Fresno, - - - - -	1910
JAMES A. WAYMIRE, ESQ.,	Alameda, - - - - -	1908
HON. C. W. SLACK, Ph. B., LL. B.,	309 Montgomery St., S. F.,	1910
JACOB BERT REINSTEIN, A. M.,	217 Sansome St., San Francisco,	1912
JOHN E. BUDD, A. B.,	Stockton, - - - - -	1916
MRS. PHEBE A. HEARST,	Mills Building, San Francisco,	1914
HON. STEPHEN M. WHITE,	Los Angeles, - - - - -	1914
GEORGE C. PARDEE, Ph. B., M. D.,	Chronicle Building, San Francisco,	1914
HON. W. H. L. BARNES,	Crocker Building, San Francisco,	1912
A. W. FOSTER, ESQ.,	Mutual Life Building, S. F.,	1916

\* Terms of Regents expire March 1.

† Deceased.

Regular meetings of the Board of Regents are held thirteen times a year, viz: In San Francisco on the second Tuesday in each month; in Berkeley, on the day preceding Commencement in the College of Letters and the Colleges of Science.

## UNIVERSITY OF CALIFORNIA

## MEDICAL DEPARTMENT

## FACULTY

- BENJAMIN IDE WHEELER, LL.D., Ph. D., President of the University, *ex officio*  
President of the Faculty.
- G. A. SHURTLEFF, M. D., Emeritus Professor of Mental Diseases and Medical  
Jurisprudence.
- R. BEVERLY COLE, A. M., M. D., M. R. C. S. Eng., Professor of Obstetrics and  
Gynecology, Chairman of the Faculty.
- ROBERT A. MCLEAN, M. D., Professor of Clinical and Operative Surgery.
- BENJ. R. SWAN, M. D., Professor of Diseases of Children.
- GEORGE H. POWERS, A. M., M. D., Professor of Ophthalmology and Otology.
- WM. WATT KERR, A. M., M. B., C. M., Professor of Clinical Medicine.
- ARNOLD A. D'ANCONA, A. B., M. D., Professor of Physiology; Dean.
- DOUGLASS W. MONTGOMERY, M. D., Professor of Diseases of the Skin.
- WASHINGTON DODGE, M. D., Professor of Therapeutics.
- JOHN M. WILLIAMSON, M. D., Professor of Anatomy and Genito-Urinary Surgery.
- JOHN W. ROBERTSON, A. B., M. D., Professor of Nervous and Mental Diseases.
- HARRY M. SHERMAN, M. D., Professor of the Principles and Practice of Surgery.
- ALONZO E. TAYLOR, M. D., Professor of Pathology; Curator.
- WM. E. HOPKINS, M. D., Clinical Professor of Ophthalmology and Otology.
- CHAS. A. VON HOFFMANN, M. D., Professor of Gynecology.
- HERBERT C. MOFFITT, B. S., M. D., Professor of the Principles and Practice of  
Medicine.
- GEO. F. SHIELS, M. D., F. R. C. S. E., etc., Associate Professor of the Princi-  
ples and Practice of Surgery.
- WM. B. LEWITT, M. D., Associate Professor of Diseases of Children.
- FRANK T. GREEN, Ph. G., Associate Professor of Materia Medica and Medical  
Chemistry.
- THOMAS W. HUNTINGTON, A. B., M. D., Associate Professor of Clinical Surgery.
- LEO NEWMARK, M. D., Lecturer on Neural Pathology.
- JOHN C. MERRIAM, Ph. D., Special Lecturer on Comparative Anatomy.
- MEYER E. JAFFA, M. S., Special Lecturer on Dietetics.
- LOUIS DE F. BARTLETT, A. B., LL. B., Special Lecturer on Medical Jurispru-  
dence.
- J. HENRY BARBAT, Ph. G., M. D., Instructor in Surgery and Surgical Anatomy.
- WILLIAM J. HAWKINS, M. D., Instructor in Physiology.
- RICHARD M. H. BERNDT, M. D., Instructor in Therapeutics.
- THOS. B. W. LELAND, M. D., Instructor in Physiology.
- JAMES F. McCONE, B. S., M. D., M. R. C. S. Eng., Instructor in Obstetrics.
- CHARLES L. MORGAN, A. B., Ph. G., M. D., Instructor in Materia Medica.
- EDWARD VON ADELUNG, JR., B. S., M. D., Instructor in Nervous Diseases.

HENRY A. L. RYFKOGEL, M. D., Instructor in Bacteriology, Director of the  
Clinical Laboratory and Assistant Curator.  
WALLACE I. TERRY, M. D., Assistant in Clinical Surgery.  
STEPHEN CLEARY, M. D., Demonstrator of Anatomy.  
CHAS. D. McGETTIGAN, A. B., M. D., Demonstrator of Anatomy  
PHILIP MILLS JONES, M. D., Librarian.

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**OUT-PATIENT DEPARTMENT**

*Medicine—*

Chief of Clinic:

J. MORA MOSS, M. D.

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Chief of Clinic:

DANIEL E. F. EASTON, M. D.

Assistant:

SANFORD BLUM, M. D.

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Chief of Clinic:

CLARENCE QUINAN, M. D.

Assistant:

ROBERT CREES, M. D.

*Surgery—*

PROF. JOHN M. WILLIAMSON, M. D.

Chiefs of Clinic:

HENRY B. A. KUGELER, M. D.

JAMES P. DUNN, M. D.

HAROLD BRUNN, M. D.

CHAS. G. LEVISON, M. D.

Assistant:

MARSHALL B. RYER, M. D.

*Genito-Urinary Clinic—*

PROF. JOHN M. WILLIAMSON, M. D.

Assistant:

CECIL M. ARMISTEAD, M. D.

---

JOHN C. SPENCER, M. D.

Assistant:

GEORGE H. RICHARDSON, M. D.

*Eye and Ear Clinic—*

PROF. GEO. H. POWERS, A. M., M. D.

Chief of Clinic:

GEORGE W. MERRITT, M. D.

Assistants:

HUGH LAGAN, M. D.

ROBERT H. ORR, M. D.

GRACE FEDER, M. D.

Clerk of Clinic:

GRACE SIMON, M. D.

*Nose and Throat Clinic—*

PROF. GEO. H. POWERS, A. M., M. D.

Assistant:

GARDNER P. POND, M. D.

*Gynecology—*

PROF. CHAS. A. VON HOFFMANN, M. D.

Chief of Clinic:

JAMES F. McCONE, M. D., M. R. C. S. Eng.

Assistants:

MARSHALL B. RYER, M. D.

Z. T. MALABY, M. D.

*Cutaneous and Venereal Diseases—*

PROF. DOUGLASS W. MONTGOMERY, M. D.

Assistants:

ALFRED B. GROSSE, M. D.

ERNEST PRING, M. D.

*Orthopedic Surgery—*

Chiefs of Clinics:

SAMUEL J. HUNKIN, M. D.

\* HENRY DU R. PHELAN, M. D.

Assistants:

JOHN J. FLOOD, M. D.

ELEANOR M. STOW, M. D.

*Nervous Diseases—*

Chief of Clinic:

EDW. VON ADELUNG, JR., B. S., M. D.

*Clinical Laboratory* — H. A. L. RYFKOGEL, M. D., Director.

\* Absent on Leave.

## THIRTY-EIGHTH ANNUAL COURSE OF INSTRUCTION

### SESSION OF 1900-1901

The Medical Department of the University of California was organized in 1872, as an integral part of the State's educational center.

The curriculum may be summarized as follows:

**Four Annual Courses.**—Attendance upon four courses, of eight months each, attended through four separate years, is required before the student can present himself for graduation. Students are required to attend the hospital and out-patient clinics regularly throughout the last two sessions.

**Graded Studies.**—By the system of graded courses the student is thoroughly drilled in the elementary subjects before proceeding higher. The following are the subjects apportioned to each year:

#### FIRST YEAR

Comparative Anatomy.	Embryology: with Laboratory Courses.
Human Anatomy, Descriptive. Particular attention given to Osteology.	Chemistry: with Laboratory Courses.
Dissections.	Materia Medica: with Laboratory Courses.
Physiology: with Laboratory Courses.	Pharmacy.
Histology: with Laboratory Courses.	

#### SECOND YEAR

Descriptive Anatomy completed.	Electro Physics: with Laboratory Courses.
Dissections.	Materia Medica completed.
Physiology completed.	Pathology: with Laboratory Courses.
Histology completed.	Elementary Bacteriology: with Laboratory Courses.
Chemistry completed. Laboratory Courses in Urinalysis & Toxicology.	

#### THIRD YEAR

Surgical Anatomy.	Gynecology.
Hygiene.	Obstetrics.
Medical Jurisprudence.	Diseases of Children.
Chemical Pathology: with Laboratory Courses.	Organic Nervous Diseases.
Therapeutics.	Clinical Medicine.
Principles and Practice of Medicine.	Clinical Surgery.
Principles and Practice of Surgery.	Out-patient Clinics.



**FOURTH YEAR**

Bacteriology, with Laboratory Courses.	Nervous and Mental Diseases.
Therapeutics.	Ophthalmology, Otology, Laryngology.
Principles and Practice of Medicine.	Applied Chemistry, Pathology, and
Principles and Practice of Surgery.	Bacteriology in Clinical Laboratory.
Gynecology.	Clinical Medicine.
Obstetrics.	Clinical Surgery.
Diseases of Children.	Out-patient Clinics.

At the end of the second year final examinations are given in Descriptive Anatomy, Physiology, Histology, Embryology, Chemistry, Materia Medica, and Pharmacy. At the end of the third year final examinations are given in Surgical Anatomy and Pathology.

Graduates of this College and those holding certificates of attendance upon lectures are credited for the full time of their medical studies by the Royal College of Surgeons of England, Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow.

**THE COLLEGIATE YEAR**

The sessions begin September 1st and continue eight calendar months.

Regular clinics are held three days each week at the City and County Hospital, where the Professors of the clinical chairs have charge of wards and possess every advantage for the instruction of students; clinics are also held daily at the College Dispensary. Lectures and laboratory courses are given daily by the Professors.

The student in this city enjoys rare natural advantages for the healthful pursuit of his labors, such a contingency as his detention from lectures or clinics by stress of weather being absolutely unknown.

## LOCATION

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Through the wise munificence of the State Legislature, it has been rendered possible for the Medical Department of the University of California to occupy its magnificent new home south of Golden Gate Park, on a site donated to the University by the late Hon Adolph Sutro.

The building devoted exclusively to the purposes of the Medical Department occupies the center of the group portrayed in the frontispiece of this Announcement. The building on the right is to be occupied by the Hastings College of the Law; that on the left by the Colleges of Pharmacy and Dentistry, jointly. In the rear is a building devoted to the purposes of the Veterinary School.

The building has a frontage of 148 feet and a depth of 208 feet. This includes an auditorium with a seating capacity of 1,200.

In addition to the equipment already in the possession of the Department it is the intention of the Faculty to provide all of the latest and best scientific appliances requisite for teaching. Having in mind chiefly the practical features of teaching, various spacious laboratories, histological, pathological, bacteriological, chemical, physiological and biological, have been provided; also a separate anatomical auditorium, besides various special demonstration rooms for teaching the classes by sections.

By reference to Plate I, giving in outline the plan of the ground floor, it will be seen that there are eight smaller rooms devoted exclusively to clinical purposes besides a large auditorium devoted to clinical surgery.

On this floor are likewise the Anatomical Preparation-room and Students' Locker-room, Janitors' Departments, Storage-room and Lavatories. (Lavatories for each sex are on every floor.)

It is almost superfluous to state, that from a sanitary standpoint the plumbing, heating and ventilation systems of the building are of the latest and most approved type.

The first floor (*vide* Plate II) is entered by means of a stately portico which ushers one into a spacious Entrance Hall, immediately beyond which is a corridor giving access to the rooms along the front of the building and to the main auditorium. On this floor will be found the

rooms of the President and the Dean, also three large Recitation rooms and the Biological and Physiological Laboratories.

The Auditorium has four distinct entrances and exits, a capacious stage and gallery; ample light both by day and by artificial means at night.

The second story (*vide* Plate III) contains beside the Pathological, Bacteriological and Chemical Laboratories, the Museum, the Students' Library and a large General Lecture room. At the rear are the entrances and exits to the gallery of the Auditorium.

The third floor (*vide* Plate IV) contains, it is believed, the finest Dissecting-room in the world at the present time. It occupies the greater part of the front of the building, running back 33 feet 6 inches, and is 20 feet high. In this room are 38 tables. The light is brilliant both by means of ample skylight and windows for the day, and by artificial light at night.

The cadavers are preserved by a method which, while excluding decomposition, keeps the tissues soft even after the expiration of two or three years.

In addition, on this floor will be found the Anatomical Lecture-room, immediately beneath the banked seats of which are on one side a Bone-room, containing many duplicate human bones, to be at the disposition of the students, on the plan of a circulating library; on the other side a Locker-room for the use of those dissecting; a Surgical and a Histological Laboratory and a Photographic-room. The Photographic-room is an especially valuable feature, rendering it possible to photograph rare cases and specimens presented at the Clinics.

There is a complete intercommunicating telephone system between all of the rooms.

The topographical advantages found in the location of the buildings are great. Facing as they do the north, on an elevation to give an unobstructed view over a large part of the peninsula on which San Francisco is situated, with Golden Gate Park in the immediate foreground, an expansive view of the harbor, the Golden Gate and the Pacific Ocean, and the mountains and hills of Marin, Contra Costa and Alameda Counties, they receive the full benefit of the neighboring trade-winds blowing directly from the ocean, coupled with the advantage of perfect drainage.

The site of the New City and County Hospital in contemplation by

the Supervisors is to be within a few blocks of the College buildings, thus offering clinical advantages conveniently close at hand.

A more commodious, better appointed building for the purposes intended it will be difficult to find, nor could the attractions and advantages offered to the student of medicine be greater.

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## MATRICULATION EXAMINATION

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Students desiring to matriculate are required to undergo examinations for admission, with the following exceptions, viz:

1. Applicants who present certificates of having successfully passed the examination for admission to the College of Letters or the Colleges of Science of the University of California, or some other recognized University or College.

2. Applicants who present diplomas or certificates of graduation from the University of California, or of some other recognized University or College.

3. Applicants who present diplomas or certificates of graduation from recognized High Schools and Academies.

4. Applicants who present diplomas or certificates of graduation from a State Normal School of California, or of any other state or territory.

Applicants whose credentials are otherwise satisfactory will be required to pass an examination in Latin and Physics, if their certificates do not cover those subjects.

Matriculants not presenting satisfactory credentials are required to pass the examination in the subjects named below, conducted by the regular examining board of the Academic Department of the University. These examinations will be held at Berkeley, August 13, 14 and 15. It is expected that the authorities will also provide an entrance examination at some earlier time at points distant from Berkeley. Applicants who wish to take the examinations held at any place other than Berkeley should notify the Dean of their intention as early as April 1st. Subjects:\* 1, 2, 3, 4, 5, 6a, b, and c; 11; 8 or 14 or 15a, or 15b, and either 10 and 13 or two of the main subdivisions (a, b, c, d,) of 12.

\*Subjects are numbered to correspond with those of the general list of preparatory subjects for admission to the Colleges at Berkeley.

1. **ENGLISH** —(a) The examination in this subject will pre-suppose thorough knowledge of grammar and elementary rhetoric, and a study of the following works: (1) *The Lady of the Lake*; (2) *Gayley's Classic Myths in English Literature* (Ginn & Co.), or *Bulfinch's Age of Fable*; (3) *The Alhambra*; (4) *Sir Roger de Coverley*,\* (5) *Short Poems: L'Allegro, Il Penseroso, Winter, Tam O'Shanter, The Deserted Village, The Winter Morning Walk, The Cotter's Saturday Night, The Ancient Mariner, Horatius*, and selections from *Byron (Syle's From Milton to Tennyson)*; (6) *The Merchant of Venice*; (7) *Julius Cæsar*; (8) *Macaulay's Warren Hastings*.

While the regular examinations will, for the present, be upon these subjects without option, teachers of approved ability, in schools on the accredited list of the University, may, after consultation with the English department, avail themselves of such substitutes as the following: for (1), *The Lay of the Last Minstrel*; for (3), *Tom Brown at Rugby*, or *Ivanhoe*; for (4), *Addison's Select Essays (Allyn and Bacon)*; for (5), some twelve poems of similar scope and character; for (6) or for (7), *Macbeth*.

(1b) **ORAL AND WRITTEN EXPRESSION.**—Training in this subject enters into the proper treatment of all topics of study taken up in the school course, and extends to speaking and oral reading as well as to writing. Its aim is to secure to the student the ability to use his mother-tongue correctly, clearly, and pertinently on all the lines upon which his thought is exercised.

A written test in this subject is required of all applicants for the status of special student in the Colleges of Letters, Social Sciences, and Natural Sciences, excepting only those who hold teachers' certificates and those who desire to take only courses in art. In the case of other applicants, for the present no separate examination will be set, but note will be made of correctness of form and adequacy of expression in the various papers written by each.

2. **ARITHMETIC** —No examination in this subject will henceforward be set, since the study comes regularly in the Grammar School, and its essential processes are involved in Algebra.

3. **ALGEBRA** —Through Quadratic Equations; namely, the various methods of factoring, the theory of exponents, integral and fractional, positive and negative, the calculus of radicals, ratio, and pro-

\*Not the meager selection sometimes used, but the full series from the *Spectator* (Thirty-three essays), as published by Cassell or the American Book Co.

portion; quadratic equations, both single and simultaneous, their solution and their theory, including all the recognized methods of solution and all equations reducible to the quadratic form and the formation of equations from given roots.

4. PLANE GEOMETRY.—Including the general properties of regular polygons, their construction, perimeters and areas, and the different methods for determining the ratio of the circumference to the diameter.

\*5. GOVERNMENT OF THE UNITED STATES.—A knowledge of the principles of government, Federal, State and local. This requirement presupposes an acquaintance with the history of the United States.

6. LATIN.—(a) *Cæsar*, Gallic War, Books I–IV; (b) elementary Latin Grammar: forms and syntax; (c) translation into Latin of simple English sentences.

While the regular examination will be confined to the books of *Cæsar*, teachers of approved ability, in schools on the accredited list of the University, may, after consultation with the Latin Department, substitute any ten† Biographies of *Nepos* for two books of the Gallic War.

#### 8. GREEK.

(a) Greek Grammar, including accents, the ordinary inflectional forms, the simpler rules of syntax, and the translation of easy English sentences into Attic Greek. *White's First Greek Book* represents the amount of preparation required.

(b) *Xenophon's Anabasis*, Books I–IV, with questions on the syntax and subject-matter. Translation at sight of ordinary passages from *Xenophon*. *Rolfe's* edition of *Xenophon's Anabasis*, Book V, is a convenient text for practice in sight translation.

#### 10. ANCIENT HISTORY AND GEOGRAPHY.

(a) Greek history to the death of Alexander, with the connected geography.

(b) Roman history to A. D. 410, with the connected geography.

*Smith's History of Greece*, *Myers' History of Greece*, *Liddell's History of Rome*, will serve to indicate the amount required.

\*Beginning with the academic year 1901–02 this subject will be Civil Government and American History.

†But *Roberts' edition of Nine Lives of Nepos* will be accepted.

11 PHYSICS.—The requirement represents at least a daily exercise during one school year, which falls within the last two years of preparation for college. It is expected that the ground covered will include fair representation of primary empirical laws from each of the main subdivisions of Physics.

The results called for demand vigorous and thorough instruction in the class-room, based upon laboratory exercises by the pupils. In addition to the test of written examination, it will be insisted upon that each candidate submit a laboratory note book, signed by his teacher, as evidence that the main principles of the subject as treated have been presented experimentally.

12. ADVANCED MATHEMATICS, CHEMISTRY, BOTANY, ZOOLOGY.

(a) *Advanced Mathematics*.—Any two of the following: 1. *Solid Geometry*. The fundamental propositions of solid and spherical geometry, accompanied by a suitable amount of exercise in problems—the whole to represent the work of one half-year. 2. *Plane Trigonometry*. The development of the general formulæ of plane trigonometry, with applications to the solution of plane triangles and the measurement of heights and distances. 3. *Advanced Algebra, Part I*. Surds and complex quantities, ratio, proportion and variation, arithmetical, geometrical and harmonic progressions, examples of other simple series, determinants, and elements of the theory of equations. 4. *Advanced Algebra, Part II*. Inequalities, limits, and indeterminate forms, exponentials, and logarithms, natural logarithms, convergency and divergency of series, indeterminate coefficients with applications to integral functions, partial fractions, expansion of functions and summation of series, permutations and combinations, the binomial theorem for any index, exponential and logarithmic series, logarithmic computation.

(b) *Chemistry*.—The preparation required will include a thorough acquaintance with the elementary principles of the science. Laboratory practice is essential.

(c) *Botany*.—A knowledge of the morphology and simpler physiology of the higher plants is required. This should be based upon a full year of practical work in the laboratory, and to some extent, also, in the field. Careful attention should be paid to the recording of observations, by notes and drawings, together with the drawing of correct inferences from the observations. It is desirable that the

pupils become familiar with the easier order of flowering plants represented in the local flora. Bergen's *Elements of Botany* (Pacific Coast Edition), Spaulding's *Introduction to Botany*, and Setchell's *Laboratory Practice for Beginners*, indicate both the scope and the method of the work.

(d) *Zoology*.—To consist of the actual study of animals, and recitations, the practical work to be the center of the preparation. The practical work should be partly in the laboratory and partly in the field. The chief aim of the examinations in the subject will be to determine how closely and accurately pupils have observed. Such guides for study as Boyer's *Elementary Biology*, Part I; Colton's *Practical Zoology*; Needham's *Elementary Lessons in Zoology*; or Dodge's *Introduction to Elementary Practical Biology*.

13. *MEDIAEVAL AND MODERN HISTORY*.—Myers' *Mediaeval and Modern History* will indicate the period to be covered and the amount required.

14. *ENGLISH*.—The examination in this subject will presuppose thorough acquaintance with the works named below, as regards organization and development of thought, as regards style and metrical structure, and as regards their relation to the author and his age: (1) Burke's Speech before the Election at Bristol, Macaulay's First Speech on the Reform Bill, and Webster's Reply to Hayne; (2) Poems, lyrical, reflective, didactic and satirical: Milton's *Comus*, *Lycidas* and *Sonnets II, XVI, XIX, XXII*, Dryden's *Alexander's Feast*, Pope's *Rape of the Lock*, Gray's *Elegy and the Bard*, Keats' *The Eve of St. Agnes* and *The Nightingale*, Shelley's *The Cloud* and *The Skylark*, Wordsworth's *Tintern Abbey*, *Laodamia*, *Ode on the Intimations of Immortality*, and *Ode to Duty*, Lowell's *The Vision of Sir Launfal*, Browning's *A Transcript from Euripides (in Balaustion's Adventure)*, Tennyson's *The Passing of Arthur*, Chaucer's *Prologue to the Canterbury Tales*; (3) Thackeray's *The Newcomes*.

While the regular examination will be confined to these subjects, schools on the accredited list of the University may, after consultation with the English Department, make such substitutions as the following: For (1), any three oratorical masterpieces of argument (including one of Burke's); for the *Rape of the Lock*,—the *Essay on Man*, or Dryden's *The Character of a Good Parson*, Pope's *Epistles to Jervas and Boyle*, and Johnson's *The Vanity of Human Wishes*; for Chau-



cer's Prologue to the Canterbury Tales,—selections from Clough and Arnold; for the Vision of Sir Launfal,—Tennyson's Enid, or his Gareth and Lynette; for Comus,—Paradise Lost, Book 1, or 2, or 5, or 6; for (3),—Silas Marner and the Vicar of Wakefield, or Henry Esmond.

15. A MODERN LANGUAGE.—Namely, either of the following, involving about two years' work:

(a) *French*.—The ability to read at sight simple French prose, and to translate correctly simple English into French; a knowledge of the principles of French grammar, as contained in any good work on the subject.

(b) *German*.—The ability to read at sight simple German prose, and to translate correctly simple English into German; a knowledge of the principles of German grammar, as contained in any good work on the subject. Ability to follow University class exercises in German, and to answer in German.

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## ADVANCED STANDING

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Students completing at the University of California the three years' Course Preparatory for Medicine are admitted to the Second-Year Class without examination. Upon the completion of the medical course they are given the two degrees of B. Sc. and M. D.

Graduates of recognized Literary and Scientific Colleges are admitted to the Second-Year Class without examination.

Students who have attended one full course in any recognized regular Medical College, requiring a preliminary examination equivalent to the one required by this institution, are, upon passing a satisfactory examination in the curriculum provided for the first year, admitted as students of the Second-Year Class, provided the courses are in different calendar years.

Students who have attended two or three full courses of lectures in any recognized regular Medical College, are upon passing a satisfactory examination in the curricula of the lower classes, admitted as students of the Third-Year or Fourth-Year Class respectively, provided the courses of lectures are in different calendar years.

Graduates of recognized regular Medical Colleges requiring attend-

ance upon four courses of lectures are admitted as students of the Fourth-Year Class upon the same conditions as given in the preceding paragraph.

Under no circumstances is a student credited with attendance upon two courses of lectures, unless such courses have been in different calendar years.

Students who have attended one or more courses of lectures in Medical Colleges not requiring a preliminary examination equivalent to the one exacted by this institution are not admitted to advanced standing unless they meet the usual matriculation requirements as given on page 11.

Graduates of Pharmaceutical Colleges in good standing are admitted to the Second-Year Class without examination, provided they meet the usual matriculation requirements.

Graduates of recognized Dental Colleges in good standing are admitted to the Second-Year Class without examination, provided they meet the usual matriculation requirements.

Certificates of private study under the direction of a physician are not recognized.

Theological and Law Students are admitted to special lectures without examination.

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## FEES

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Matriculation Fee (paid but once).....	\$ 5 00
Practical Anatomy Ticket for each of two years.....	10 00
Tuition Fee (for each year of attendance).....	100 00
Graduating Fee (paid but once, but not returnable).....	25 00

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A Key and Breakage deposit of five dollars is required each year for the use of lockers and to cover cost of damage to College building and equipment. At the close of the session the unexpended balance is returned to the students. During the last session the charges were nominal. A similar deposit of two dollars and a half is required for each laboratory course taken, to cover cost of material and injury to apparatus. A Breakage deposit of five dollars is required at the College Dispensary, for each of the last two years of the curriculum.

## REQUIREMENTS FOR GRADUATION

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I. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while at the College. The Faculty reserves the right to terminate the connection of any student with the institution at any time on the ground of what it may deem moral or mental unfitness for the profession.

II. He must have studied medicine four full years and must have attended four regular courses of lectures in separate calendar years, the last of which must have been that of the University of California.

III. He must have passed the required examinations, written and oral.

IV. He must have pursued the study of practical anatomy during at least two sessions, and must present certificates of having dissected every part of the cadaver.

V. He must have paid in full the College fees, including the graduation fee.

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## BOARDING

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The expense of living in San Francisco is not great. Good board with room rent may now be procured at the low rate of five dollars per week, at a convenient distance from the College building.

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## HOSPITAL APPOINTMENTS

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The position of Intern, or House Physician and Surgeon, in the City and County Hospital, is open each year to three members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year, and secure opportunities for accumulating an invaluable experience in every field of Medicine and Surgery.

On completion of the term of service, a certificate is issued by the San Francisco Board of Health and the authorities of the City and County Hospital, as evidence of the faithful performance of the required duties.

Students of the Fourth-Year Class desiring these appointments are required to make application in writing to the Dean, at least two weeks before the close of the session.

The City Receiving Hospital is open to students and graduates of this institution. In this hospital an excellent opportunity is afforded for experience in emergency work.

Several of the private hospitals in the city provide positions on the house staff, which are open to graduates of this College, viz:

St. Mary's Hospital, St. Luke's Hospital, U. S. Marine Hospital, La Maison de Santé (French Hospital), German Hospital, Hospital for Children, and Mount Zion Hospital.

Assistants to the staff of the San Francisco Polyclinic are also appointed from the graduates of this institution.

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#### HOSPITAL APPOINTMENTS—FROM CLASS OF 1900.

CITY AND COUNTY HOSPITAL (San Francisco).—*University of California Wards*.—William Harvey, George F. Reinhardt, Louis V. Saph. *Polyclinic Ward*.—Herbert C. Watts.

ST. LUKE'S HOSPITAL.—George J. McChesney, William G. Moore.

FRENCH HOSPITAL.—Samuel W. R. Langdon, Edwin M. Wilder.

SOUTHERN PACIFIC RAIL ROAD HOSPITAL.—Harry E. Alderson.

RECEIVING HOSPITAL (San Francisco).—Rutherford B. Irones.

U. S. MARINE HOSPITAL.—Arthur M. McIntosh.

CHILDREN'S HOSPITAL.—Dora I. Dorn, Julia P. Larson, Theodora E. Vassault, Ernestine Doychert.

CAPE NOME MINING CAMP HOSPITAL.—George J. Sweeney.

LIVERMORE SANITARIUM.—Raymond J. Russ.

BYRON HOT SPRINGS.—Frank W. Simpson.

## COURSES OF INSTRUCTION

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A brief outline of the courses pursued by the several departments will be found in the following summary:

**Anatomy.**—The course in Anatomy is illustrated by demonstrations on the cadaver, and by both wet and dry preparations, models, manikins, drawings and diagrams, and includes a course on general, special, topographical and surgical anatomy. The dissecting room is spacious, well ventilated, lighted from above, and provided with the necessary conveniences. It is open daily throughout the year, under the superintendence of the Demonstrators of Anatomy. A supply of material is always procurable at small cost. When dissections are conducted in a diligent and satisfactory manner, the student is furnished with certificates stating the amount and part dissected. One of the demonstrators is present daily in the dissecting room during working hours, so that students will receive the proper attention and assistance.

An osteological room is open during the term, where students have the opportunity of studying the anatomy of bones and articulations. Special demonstrations are conducted in this room for members of the First-Year Class.

A course of lectures on Surgical Anatomy is delivered before the Third-Year Class.

The principal feature of the entire course is the thorough drill in Practical Anatomy. Students who have been careless or negligent in their dissections are not granted certificates until by additional work they have entirely covered their deficiencies.

**Comparative Anatomy.**—Prof. John C. Merriam, of the Academic Departments of the University, will give a course of lectures and demonstrations in Comparative Anatomy.

**Physiology.**—The lectures in this department by Professor D'Ancona and Drs. Hawkins and Leland embrace a consideration of both general and special Physiology, and are illustrated by a complete series of colored drawings and by photographs projected upon a screen by means of the stereopticon. The course extends through two years, one year being devoted to the physiology of the nervous system and reproduction, the other to nutrition, respiration, circulation, etc., and the special senses.

The Laboratory work comprises individual experimentation in muscle, circulation, respiration, digestion and blood. Graphic tracings are taken and preserved by each student and the results are reported. The Laboratory contains the best apparatus obtainable for scientific investigation along these lines, and enough duplicates of each to allow every student to do the work himself.

**Normal Histology and Embryology.**—A course of lectures and laboratory exercises is given in which every effort is made to give the student a first hand knowledge of the subjects taught and, above all, to familiarize him with the use of the microscope, microtome, and the ordinary methods of fixation, staining and mounting of microscopic sections. All the cellular elements of the body are studied and, as far as practicable, the minute anatomy of the various organs.

Demonstrations of the embryological development of the common fowl are given, towards the close of the term.

**Dietetics.**—Prof. Meyer E. Jaffa, of the Academic Departments of the University, gives a course of lectures on the composition and digestibility of foods and their uses; metabolism; food adulteration. They include a careful study of the different nutrients as found in simple food materials and complex manufactured articles.

The course is designed to give the student a scientific basis for the prescription of dietaries for children and adults, and to aid in the cure and prevention of diseases.

**Laboratory Course.**—For those qualified a laboratory course will be given to students who may wish to make practical dietary studies or undertake special investigations in metabolism.

**Pathology.**—The course of instruction in the department of Pathology, which has been entirely reorganized and superbly equipped, extends through the sophomore and junior years. The instruction is divided into three branches: general morphological pathology, macroscopic and microscopic; pathological chemistry so called, more accurately termed chemical pathology; and bacteriology.

The course in general pathology is given during the sophomore year. The fresh autopsy material is first demonstrated, following which each student prepares therefrom his own sections. Each student has his own desk, locker, paraffine and celloidin apparatus, dropping bottles, reagents, stains and staining dishes. The department has been fitted

out with Leitz microscopes of the largest size and latest design, provided with movable stages, and with four oculars and objectives each; one such instrument is placed at the exclusive disposal of each student. From a large reserve collection of material, sections of such lesions and conditions as were not presented in the fresh tissues are furnished to the students, so that during the year all of the important pathological states are demonstrated and studied. An especial feature of this course is a thorough instruction in neuropathology, under the direction of Dr. Leo Newmark. Another especial feature is the instruction in hæmatopathology. Every two students have for their exclusive use a Sahli hæmoglobinometer, and a Zeiss hæmocytometer with the Zappert counting-chamber and the Miescher pipettes. With these instruments, supplemented by the study of stained specimens of blood, the students will attain that facility in blood examinations which is so essential in practical medicine. The objects of the course are three fold: to elucidate the nature of disease from the biological standpoint; to teach morbid anatomy in the broadest sense of the term; and to equip the students with important diagnostic procedures. This course occupies eight hours per week during the entire session. The instruction consists of practical work solely, and includes no didactic lectures.

The course in chemical pathology is given during the junior year. Its aim is to demonstrate the pathological functionation of the organs and tissues, as distinguished from the pathological appearances of organs and tissues as demonstrated in the course upon general pathology. Each student has here also his own laboratory desk, apparatus, and reagents. The course includes the chemical study of the various organs and tissues of the body in various diseases, of exudates and transudates, and of the gastric contents, the fæces, and the urine. The objects of the course are twofold: to enable the students, through a comprehension of the phenomena of morbid physiology, better to understand disease from the practical standpoint; and to endow them with those most important diagnostic procedures applied to the urine, the fæces and the gastric contents. This course occupies eight hours per week during the entire academic year. The instruction is composed entirely of practical laboratory work, and includes no didactic lectures.

The private laboratories of Pathology are installed, in both the

morphological and chemical departments, with complete equipments of latest designs for original work. It is the intention of the University to open these laboratories, under the direction and supervision of the head of the department, to such physicians and post-graduate students as desire and are qualified to do original work. Particular information regarding these laboratories may be obtained from the Professor of Pathology.

**Bacteriology.**—Instruction in Bacteriology is given during the junior year. Equipped with the microscopic technique acquired during the freshman and sophomore years, and with a knowledge of general pathology, the students are prepared to study with profit this most important branch of etiology. Each student has in the laboratory of bacteriology his own desk, locker, apparatus, reagents, stains, and individual microscope of a type similar to those employed in the study of general pathology. Each student prepares his own culture media, grows his own cultures of bacteria, and studies directly their appearances and the phenomena of their life. Infectious diseases are then studied in original lesions, and the relations of micro-organisms to general and special pathological conditions are thus demonstrated. The objects of this course are two-fold: to impart a knowledge of microbiology, and to teach the diagnostic technique of practical bacteriology. The course occupies two afternoons a week, and consists entirely of laboratory work.

**Medical Chemistry and Materia Medica.**—Associate Professor Green gives special attention to the part of Chemistry relating to Medicine and Pharmacy. The lectures are illustrated by experiments, and the theory is demonstrated practically by excursions to various public works from time to time. The nature, origin, physical and chemical properties of the various remedies official in the United States Pharmacopœia are fully elucidated. The cabinet of Materia Medica, which contains the important as well as the new and rare drugs and pharmaceutical preparations employed in medicine, is used to illustrate the lectures.

**Practical Chemistry.**—The Chemical Laboratory has been thoroughly refitted with the latest and most approved apparatus. Special facilities are offered the student for study in the optical methods of analytical chemistry. Each student is provided with a separate



bench and set of apparatus and reagents, performing individually all experiments. A systematic course is given in Practical Chemistry, including qualitative and quantitative analysis of water, foods, milk, urine, mineral and vegetable poisons.

*First Year.*—Each student performs a series of experiments in which he develops the main principles of medical chemistry, and becomes familiar with chemical substances and their reactions.

*Second Year.*—The simplest and most approved methods of examining water, milk and urine, chemically and microscopically, are performed by each student. The course closes with a series of tests for alkaloids in organic and other mixtures.

**Chemical Laboratory.**—*First Year.*—The important feature of the first year's work is the *reactions* of the *acids* and *bases*, together with chemical manipulation from an analytical standpoint. The object of such work is to familiarize the student with acids and salts, together with their behavior towards each other, that he may gain a knowledge of chemical incompatibilities.

*Specific Gravity* with *Hydrometers* and *Westphal Balance* is then considered.

This is to be followed by *Urinalysis* (qualitative). First Part: Normal properties and constituents. Second Part: Abnormal properties and constituents. Third Part: The separation of urinary sediments by the centrifuge, together with the study of their forms, crystalline, organized and amorphous, also their micro-chemic behavior towards reagents.

*The Spectroscope* in its application to the analysis of the flames of volatilizing alkalies and earths; also the identification of the absorption spectra of blood and certain organic colors follow.

*Laboratory Studies* of the chemistry of the sugars, starches, fats, proteins, blood, bone and muscular tissue follow.

*Toxicology* from an analytical standpoint is dwelt upon, embracing the tests for identification of the volatile, mineral and vegetable poisons.

Each student is required to be present at the laboratory sessions, keep desks, apparatus and reagent bottles clean and in order, keep a journal, and submit reports to the professor in charge.

*Second Year.*—*Quantitative relationship* of *volume* and *weight*, or *specific gravity* of solids lighter and heavier than water, of both heavy

and light liquids. By means of the Pycnometer, Erdman float and Westphal balance, specific gravity is dwelt upon as much to familiarize the student with the metric system, as for the special teaching and experience gained.

*Quantitative* urinalysis is pursued with a view to aid in diagnosis.

*Urine.*—Volumetric estimations: glucose, acidity, chlorides, albumen, phosphates. Gravimetric estimations: sulphates, chlorides, uric acid, albumen. Gasometric estimations: glucose and urea (by decomposition). The analysis of gastric contents, qualitative and quantitative, is carried on.

*The Polariscopes* and its use in estimating the quantities of glucose in diabetic urine, with a control by Fehling's method. The polarization of albumen.

*Milk analysis* according to the standards adopted by the San Francisco Board of Health. Milk, with its organic and inorganic constituents; numerous samples to be analyzed in the laboratory by each student, not only examined as to adulteration but as regards composition.

*Water analysis* from a sanitary standpoint, both qualitative and quantitative, as factors in the determination of purity.

*Toxicology.*—The search for poisons in foods and tissues, and microchemistry of poisons. The student is required to separate and detect poisons, using corroborative methods of identification.

*Food adulteration* and its detection. Tea, coffee, cocoa, butter, sugar, confectionery, honey, beverages, liquors, vinegar, pickles and condiments.

Students are required to be present at laboratory, keep desks, apparatus, reagent bottles, etc., clean and in order, to keep a journal, bring samples, and submit reports to the professor in charge.

**Materia Medica.**—Dr. C. L. Morgan, Instructor in *Materia Medica*, in his course describes fully the various classes of preparations recognized in the U. S. Pharmacopœia and demonstrates practically the method of their preparation. At the same time a knowledge of Pharmacy is imparted and the intricacies of Prescription Writing fully elucidated. Laboratory instruction is given to the Second-Year Class.

**Therapeutics.**—This department is in charge of Professor Dodge and Dr. Berndt. During the Junior year the class will be thoroughly instructed in the physiological action of drugs and the therapeutic indications for their use by Dr. Berndt.

During the Senior year the class will be taken up by Professor Dodge, who gives a course of lectures on the treatment of individual diseases. It is the aim of these lectures to set forth the etiology fully, basing thereon the treatment. The latter embraces not only the medicinal but the hygienic; the limitation as well as the use of the various remedies being taught.

The subject of Therapeutics also embraces a full course on Electrotherapeutics.

**Surgery.**—Students in the third and fourth years attend two hours a week, throughout the college year, in the Principles and Practice of Surgery. Instruction is given by lectures, properly illustrated, and by recitations.

Students in the third year attend, also, one hour a week throughout the session, lectures and demonstrations on Surgical Technology.

**Practice of Medicine.**—During the coming year the Principles and Practice of Medicine will be taught in a somewhat different way. In addition to lectures and recitations, the case method of teaching will be tried, and clinical material and pathological specimens used to illustrate didactic work.

**Obstetrics.**—The science and art of Obstetrics are taught by Professor R. Beverly Cole and Dr. James L. McCone. Their lectures are fully illustrated by the use of colored plates and drawings, prepared specimens, and the manikin. The principal obstetric operations are performed on the cadaver in the presence of the class.

**Gynecology.**—This subject is taught didactically and clinically by Professor Cole and Professor von Hoffmann. The use of gynecological instruments is carefully shown, and the several procedures explained by means of colored charts, diagrams and manikins.

**Nervous and Mental Diseases.**—The instruction, in addition to the regular lectures by Professor Robertson on the Medical Jurisprudence of Insanity, includes a course on Alcoholism and Narcotics, together with a discussion of the localization of lesions of the nervous system. These lectures are illustrated by specially pre-

pared plates and diagrams, showing the results of the most recent investigations. It is intended to illustrate this subject further by demonstrations of normal and pathological brains and spinal cords.

Functional nervous diseases including the various phases of Hysteria and Hypnotic conditions, will receive special attention. The instruction in both functional and organic diseases of the nervous system is supplemented by clinical lectures and demonstrations. It is intended that the students shall further familiarize themselves with the pathological appearance of nervous tissue, not only by observing sections already prepared, but by actual work in the laboratory.

In addition to the regular lectures on Insanity, visits are made to the various city and State institutions for the care of the insane, so to acquaint the students more thoroughly with the characteristic features of the disease.

**Diseases of Children.**—Professor Swan and Associate Professor Lewitt devote one hour each week to this subject, illustrating their lectures by notes drawn from an unusually large experience in the management of diseases peculiar to children.

**Medical Jurisprudence.**—*The Law in its Relation to Public Health.* Governmental power to protect the public health; its exercise through federal, State and municipal officers; the nuisances it can abate, and the methods of so doing; its regulation of professions, of business pursuits, of the production and adulteration of food products, and of the use of property; the care of the public health in San Francisco, under general laws and the San Francisco Charter.

One hour a week during a portion of the second term.

## CLINICAL TEACHING

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*In Clinical Teaching* the plan pursued by the several Clinical Professors has for its aim the actual confronting of the students with the phenomena of disease, that the senses of sight, hearing and touch may be trained to aid in forming a correct diagnosis.

The facilities for clinical studies open to the students of the University are ample. Full access is given to the City and County Hospital, an institution containing five hundred beds, and presenting for observation perhaps every known form of disease, including those peculiar to tropical and South America. The staff of the Hospital is largely drawn from the Faculty of the University, giving them unusual advantages for developing clinical material. The Professor of Clinical Surgery has charge of three surgical wards (thirty-two beds in each), the Professor of Clinical Medicine two wards, the Professor of Obstetrics and Gynecology and the Professor of Ophthalmology, one ward each. Autopsies are conducted three times a week in the Mortuary by the Pathologist. A large operating theatre has been erected where the major and minor operations of surgery are performed in view of the class. Operating days are Tuesday and Saturday. The Hospital is situated at the junction of Twenty-second street with Potrero avenue, and is accessible from the North Beach and Mission cars, the Howard street, Mission street, and Valencia street lines.

## HOSPITAL CLINICS

**Clinical Surgery.**—Professor McLean and Associate Professor Huntington deliver clinical lectures on Practical and Operative Surgery, at the City and County Hospital, on Tuesdays, Thursdays and Saturdays, throughout the session. Especial attention is given, in a ward devoted to the purpose, to the conduct of disorders of the genito-urinary organs and venereal diseases. A course of Minor Surgery is also given. Instruction in this branch includes the application of bandages and the various dressings used in treating wounds, fractures, dislocations, etc.

REPORT OF THE SURGICAL DIVISION OF THE HOSPITAL OF THE CITY AND COUNTY OF SAN FRANCISCO, UNDER THE CHARGE OF ASSOCIATE PROFESSOR HUNTINGTON OF THE UNIVERSITY OF CALIFORNIA, FROM APRIL 30TH, 1899, TO APRIL 30TH, 1900.

## General Surgery.

## Bones and Joints—

Arthritis Deformans.....	2	Fracture of Scapula.....	1
“ of Elbow, Tubercular.....	1	“ of Skull.....	3
“ of Hip “.....	1	“ of Tibia.....	12
“ of Knee “.....	1	Compound Fracture of Fibula.....	2
“ of Knee, Traumatic.....	1	“ of Radius.....	1
“ Metatarso-Phalangeal.....	1	“ of Tibia.....	2
“ of Shoulder.....	2	“ of Ulna.....	1
Bunion, Suppurative.....	1	Gunshot Wound of Knee.....	1
Bursitis, Prepatellar, Hemorrhagic.....	1	Mastoid Disease.....	2
Bursitis, Prepatellar, Suppurative.....	1	Necrosis of Os Calcis.....	1
Dislocation of Astragalus.....	1	“ of Superior Maxilla.....	1
“ of Elbow.....	1	Osteitis of Finger.....	1
“ of Great Toe.....	1	“ of Sternum, Tubercular.....	1
“ of Hip.....	1	Osteitis of Tibia.....	1
“ of Patella.....	1	“ of Toe.....	1
“ of Radius.....	1	“ of Vertebrae, Tubercular.....	1
“ of Shoulder.....	3	Osteomyelitis of Femur.....	1
Epithelioma of Inferior Maxilla.....	3	Periostitis of Femur.....	1
Fracture of Astragalus.....	1	“ of Fibula.....	1
“ of Clavicle.....	3	Rheumatism, Chronic Articular.....	1
“ of Femur, Impacted.....	2	Sarcoma of Femur.....	1
“ of Femur, Simple.....	6	“ of Superior Maxilla.....	1
“ of Fibula.....	11	Scoliosis.....	1
“ of Humerus.....	3	Sprain of Ankle.....	14
“ of Inferior Maxilla.....	4	“ of Knee.....	2
“ of Malar Bone.....	1	“ of Spine.....	2
“ of Metacarpus.....	1	“ of Wrist.....	5
“ of Nasal Bone.....	2	Synovitis of Knee.....	1
“ of Patella.....	1	“ of Wrist.....	1
“ of Ribs.....	1	Vicious Union of Humerus.....	2
“ of Radius.....	2	“ of Radius.....	2

Digestive Tract—		Dermatitis Venenata.....	2
Abscess of Liver.....	4	" of Feet, Chronic....	1
" Ischio-Rectal.....	1	Eczema.....	2
Appendicitis, Recurrent.....	6	Empyema.....	4
" Suppurative.....	1	Epistaxis.....	1
Carcinoma of Esophagus.....	1	Epithelioma of Face.....	2
" of Pharynx.....	1	" of Lower Lip.....	1
Cholelithiasis.....	1	" of Neck.....	1
Cirrhosis of Liver with Ascites.....	1	Gangrene of Lung.....	1
Cyst of Pancreas.....	1	" of Perineum.....	1
Fecal Fistula.....	1	" of Toes, Senile.....	1
Fistula in Ano.....	5	Gunshot Wound of Chest.....	2
Inguinal Hernia, Complete.....	7	" " Thigh.....	1
" " Incomplete.....	2	Hematoma of Face.....	1
Prolapse of Rectum.....	1	Hemorrhoids.....	5
Stricture of Rectum.....	1	Herpes Zoster.....	1
Ulcer of Rectum, Tubercular.....	1	Insect Bite of Hand.....	1
" " Chronic.....	2	Lymphadenitis, Axillary.....	1
" of Tongue.....	1	" Cervical, Tubercular.....	2
Congenital Deformities—		Lymphadenitis, Inguinal.....	10
Genu Varum.....	1	Peritonitis, Chronic Tubercular.....	1
Nervous System—		" Acute Traumatic.....	1
Alcoholism, Acute.....	8	Phlegmon of Arm.....	3
Convulsions, Infantile.....	1	" of Hand.....	4
Concussion of Brain.....	4	" of Leg.....	1
Dipsomania.....	1	" of Scalp.....	1
Gunshot Wound of Head.....	1	Phlebitis.....	2
Hypochondriasis.....	1	Pulmonitis, Traumatic.....	1
Morphinism.....	2	Rupture of Ligamentum Patellæ.....	1
Neurofibromata in Amputation Stump.....	2	" of Quadratus Femoris Tendon.....	1
Tabes Dorsalis.....	1	Sarcoma of Face.....	1
Soft Parts—		" of Thyroid Gland.....	1
Abrasion of Buttock.....	1	Sinus of Face.....	1
Abscess, Alveolar.....	3	Trichinosis.....	1
" of Axilla.....	1	Tumor of Back.....	1
" of Back, Tubercular.....	3	Septicemia.....	2
" of Shoulder, Tuberc'r.....	1	Ulcer of Leg, Phagedenic.....	2
" of Thigh, Tubercular.....	1	" " Traumatic.....	2
" of Thigh.....	2	" " Tubercular.....	1
Acne Vulgaris.....	1	" " Varicose.....	21
Adenitis of Neck.....	1	Varicose Veins of Leg.....	3
Adenoma of Neck.....	1	Wounds, Incised.....	12
Burn of Face.....	1	" Infected.....	7
Cicatrices of Mouth.....	1	" Lacerated.....	15
Contusion of Abdomen.....	1	" Penetrating.....	7
" of Back.....	5	Genito-Urinary—	
" of Chest.....	3	Abscess of Prostate.....	1
" of Elbow.....	2	Arthritis, Gonorrhœal.....	3
" of Eyelid.....	1	" Syphilitic.....	2
" of Face.....	5	Carcinoma of Bladder.....	1
" of Foot.....	5	Chancroids.....	4
" of Head.....	2	Cystitis, Acute Gonorrhœal.....	3
" of Hip.....	2	" Chronic.....	2
" of Knee.....	3	Epididymitis.....	4
" of Scalp.....	1	Gangrene of Penis.....	1
" of Shoulder.....	4	" of Scrotum.....	1
" of Spine.....	1		

Hydrocele.....	4	Stricture of Urethra.....	6
Paraphimosis.....	1	Syphilis.....	15
Phimosis.....	1	Urethritis, Gonorrhœal.....	1
Prostatic Hypertrophy.....	6	Varicocele.....	3
Retention of Urine.....	2	Diagnosis not made.....	9

**Clinical Medicine.**—Professor W. W. Kerr will deliver a course of lectures on Clinical Medicine at the same hospital each Tuesday, Thursday and Saturday. The course of study will consist of the demonstration of cases illustrating the different phases and peculiarities which disease assumes, the examination of patients at the bedside by the student, under the guidance of the professor, together with instruction in all those details which qualify the student to discharge his duty agreeably and efficiently in the sick-room.

The students of the Third-Year Class, besides attending the clinical lectures given by Professor Kerr, will be given clinical demonstrations in the wards. Particular attention will be paid to Physical Diagnosis.

REPORT OF THE MEDICAL DIVISION OF THE HOSPITAL OF THE CITY AND COUNTY OF SAN FRANCISCO, UNDER THE CHARGE OF PROFESSOR WM. WATT KERR, FROM APRIL 30TH, 1899, TO APRIL 30TH, 1900.

### Medical Report.

#### SPECIAL INFECTIOUS DISEASES.

Typhoid Fever.....	23	Malarial Fever, Tertian.....	6
Varicella.....	1	“ “ Quotidian.....	1
Measles.....	4	“ “ Estivo-Autumnal.....	4
Epidemic Parotitis.....	1	Syphilis, Secondary.....	3
Influenza.....	2	“ Tertiary.....	9
Cerebro Spinal Meningitis.....	1	“ Cerebro-Spinal.....	4
Diphtheria.....	1	“ Cerebral.....	2
Erysipelas.....	7	“ of Basilar Artery.....	1
Septicæmia.....	1	“ Periosteal.....	4
Septico-Pyæmia.....	1	Leprosy.....	1
Dysentery.....	2	General Pneumococcus Infection.....	1
Malarial Fever.....	5	Indefinite Infection.....	1
“ “ Intermittent.....	5		

#### CONSTITUTIONAL DISEASES.

Rheumatism, Acute Articular.....	25	Diabetes Mellitus.....	1
“ Subacute.....	4	“ Insipidus.....	1
“ Chronic.....	8	Scorbutus.....	1
“ Acute Gonorrhœal.....	2	Purpura, Simplex.....	2
“ Muscular.....	5	“ Hemorrhagica.....	2
Arthritis, Deformans.....	2	Transient Glycosuria.....	1
Gout.....	3		



## DISEASES OF THE DIGESTIVE SYSTEM.

Diseases of Mouth—		Intestines—	
Stomatitis .....	1	Appendicitis .....	2
Mercurial Stomatitis .....	3	Constipation .....	3
Glossitis, Syphilitic .....	1	Colic .....	1
Acute Follic. Tonsillitis .....	2	Liver—	
Œsophagus—		Active Congestion .....	1
Stricture of Œsophagus .....	1	Catarrhal Jaundice .....	1
Stomach—		Obstructive Jaundice .....	1
Acute Catarrhal Gastritis .....	4	Cholelithiasis .....	1
Acute Gastritis .....	3	Perforation of Gall-Bladder .....	1
Alcoholic Gastritis .....	2	Hepatic Cirrhosis .....	12
Chronic Gastritis .....	4	“ Abscess, Chronic .....	1
Atonic Dyspepsia .....	2	“ Carcinoma .....	2
Nervous Dyspepsia .....	1	Pancreas—	
Carcinoma Ventriculi .....	3	Pancreatic Cyst .....	1
Hemorrhage from Stomach .....	1	“ Carcinoma .....	2
Intestines—		“ Sarcoma .....	1
Intestinal Indigestion .....	1	Peritoneum—	
Catarrhal Enteritis .....	2	Acute General Peritonitis .....	5
Diarrhœa, Chronic .....	4	Tubercular Peritonitis .....	5
Diarrhœa, Acute .....	1	Retro-Peritoneal Abscess .....	1
Colitis .....	2		

## DISEASES OF THE RESPIRATORY SYSTEM.

Nose—		Lungs—	
Sarcoma, Naso-pharynx .....	1	Lobar Pneumonia .....	23
Larynx—		Broncho-Pneumonia .....	29
Tubercular Laryngitis .....	5	Hypostatic Pneumonia .....	9
Syphilitic Laryngitis .....	4	Emphysema .....	4
Bronchi—		Gangrene of Lung .....	1
Acute Bronchitis .....	14	Syphilis of Lung .....	1
Subacute Bronchitis .....	2	Pleura—	
Chronic Bronchitis .....	6	Acute Fibrinous Pleurisy .....	6
Bronchial Asthma .....	5	Acute Sero-Fibrinous Pleurisy .....	2
Cardiac Asthma .....	2	Empyema, Chronic .....	1
Lungs—		Tubercular Pleurisy .....	1
Passive Congestion .....	1	Chronic Pleurisy with Effusion .....	2
Pulmonary Tuberculosis .....	138	Hydro-Pneumo Thorax .....	1

## DISEASES OF CIRCULATORY SYSTEM.

Pericardium—		Heart—	
Acute Pericarditis .....	1	Chronic Myocarditis .....	34
Heart—		Tachycardia .....	2
Acute Endocarditis .....	6	Angina Pectoris .....	1
Chronic Endocarditis .....	13	Arteries—	
Aortic Incompetency .....	5	Arterio Sclerosis .....	9
Mitral Incompetency .....	14	Aneurism, Arch Aorta .....	1
Mitral Stenosis .....	2	Dilatation of Aorta .....	1
Tricuspid Incompetency .....	1	Veins—	
Aortic Stenosis .....	1	Thrombosis, Femoral Vein .....	1
Acute Dilatation of Heart .....	1	“ Posterior Tibial .....	1

## DISEASES OF BLOOD AND DUCTLESS GLANDS.

Secondary Anemia .....	1	Myxœdema .....	1
Addison's Disease .....	1	Lithemia .....	1
Exophthalmic Goitre .....	2		

DISEASES OF KIDNEYS.

Acute Congestion.....	1	Subacute Parenchymatous Neph.	1
Uremia.....	2	Acute " " "	4
Acute Infectious Nephritis.....	2	Chronic " " "	21
		Chronic Interstitial Nephritis.....	18

DISEASES OF NERVOUS SYSTEM.

Nerves—		Brain—	
Neuritis, Traumatic.....	2	Hemiplegia, Left.....	3
" " Alcoholic.....	6	" " Right.....	1
" " Lead.....	1	Multiple Sclerosis.....	1
" " Peripheral.....	4	Tumors of Brain.....	7
" " Multiple.....	3	Paralysis Agitans.....	2
" " Infectious.....	1	Chorea.....	1
" " Optic.....	1	Epilepsy, Petit Mal.....	1
" " Spinal Nerve Roots.....	1	" " Grand Mal.....	3
" " Sciatica.....	6	" " Hystero-Epilepsy.....	1
Cord—		Migraine.....	1
Acute Myelitis.....	1	Neuralgia, Facial.....	2
Spastic Paraplegia.....	1	Hysteria.....	3
Tabes Dorsalis.....	11	Neurasthenia.....	13
Syringo-Myelia.....	2	Hypochondriasis.....	4
Progressive Muscular Atrophy.....	1	Cerebral Softening.....	2
Brain—		Softening in Pons.....	1
Aphasia.....	1	General Paresis.....	2
Meningitis, Tubercular.....	1	Dementia.....	5
" " Syphilitic.....	1	Chronic Mania.....	3
" " Suppurative Septo.....	1	Melancholia.....	3
" " Meningitis.....	1	Lympho-Sarcoma, Base of Brain.....	1
Cerebral Hemorrhage.....	7	Cerebral Concussion.....	1
" " Thrombosis.....	1		

INTOXICATIONS.

Alcoholism, Acute.....	5	Potomaine Poisoning.....	1
" " Chronic, Delirium Tremens.....	20	Strychnine Poisoning.....	1
Morphinism.....	4	Carbolic Acid Poisoning.....	1
Nicotinism.....	1	Mercurial Poisoning.....	2
Lead Poisoning.....	2	Illuminating Gas Poisoning.....	1

SKIN DISEASES.

Ecthyma.....	2	Dermatitis Venenata.....	1
Herpes Zoster.....	4	Epithelioma of Face.....	3
Eczema.....	3		

DISEASES DUE TO ANIMAL PARASITES.

Psorospermiasis.....	1		
Trichiniasis.....	2		
Intestinal Cestoidia.....	1		

MISCELLANEOUS.

Not Diagnosed.....	12	Periostitis, Thorax.....	1
Senile Debility.....	1	Simulation.....	1
Inanition.....	3	Gonorrhoea.....	3
Senile Marasmus.....	1	Epididymitis.....	2
Periostitis, Leg.....	1	Cystitis.....	2

SILVIO J. ONESTI, M. D.,  
House Physician and Surgeon, C. & C. Hospital.

**Ophthalmology and Otology.**—Professor Powers will deliver one didactic lecture a week during the course, covering the subjects of the Eye and Ear. These lectures will be illustrated by models, charts and blackboard drawings. He will also conduct two clinics a week at the College Dispensary, where, in addition to operative and severe cases, he has a large out-patient clinic, including many children, with many illustrations of cases as they appear in daily practice. At these clinics senior students are required, in turn, to keep record of the cases, with a view to cultivate a habit of casewriting. Professor W. E. Hopkins will hold one clinic a week at the City and County Hospital and deliver a course of lectures on the Nose and Throat with quizzes.

REPORT OF OPHTHALMOLOGIC AND OTOLOGIC DIVISION OF THE HOSPITAL  
OF THE CITY AND COUNTY OF SAN FRANCISCO, UNDER THE CHARGE  
OF PROFESSOR W. E. HOPKINS, OF THE UNIVERSITY OF CALIFORNIA, FROM  
APRIL 30TH, 1899, TO APRIL 30TH, 1900.

Cataract, Congenital.....	1	Iritis, Simple.....	2
"    Senile.....	6	"    Syphilitic.....	5
"    Simple.....	4	"    Traumatic.....	1
"    Soft.....	7	Keratitis, Punctata.....	1
"    Traumatic.....	2	"    Simple.....	3
Chalazion.....	2	"    Syphilitic.....	2
Conjunctivitis, Catarrhal.....	2	"    Ulcerative.....	1
"    Gonorrheal.....	2	Leucoma.....	4
"    Purulent.....	1	Optic Atrophy.....	3
"    Trachomatous.....	5	Optic Neuritis.....	1
Choroiditis, Exudative.....	1	Otitis, Media Catarrhalis.....	1
"    Syphilitic.....	2	Retinitis, Syphilitica.....	1
Entropion.....	2	Rhinitis, Hypertrophica.....	1
Enucleation of Eye.....	1	Staphyloma, Anterior.....	1
Dislocation of Lens.....	2	Tonsillitis, Follicular.....	1
Frontal Sinus Disease.....	1	"    Phlegmonous.....	2
Pterygium.....	1	"    Syphilitic.....	1
Glaucoma, Chronic.....	2	Ulcer of Cornea, Perforating.....	1
"    Traumatic.....	1	"    Traumatic.....	1
Iritis, Chronic.....	1		
"    Rheumatic.....	3	Total.....	82

OPERATIONS.

Iridectomy.....	10	Operation for Entropion.....	3
Enucleation.....	1	"    Chalazion.....	1
Cataract Operations, Removal.....	4	"    Frontal Sinus Dis'ce.....	1
"    "    Needling.....	4	Removal of Polypi, Nasal.....	1
Canthotomies, External.....	1	"    "    Aural, Malignant.....	1
Pterygium, Removal.....	1		
Expression of Trachoma.....	1	Total.....	29

G. E. EBRIGHT, M. D., Internae.

**Gynecology and Practical Midwifery.** — Professor R. Beverly Cole, Professor Charles A. von Hoffmann and Dr. James F. McCone, will hold a Thursday Clinic, including a course of instruction in Operative Gynecology, the use of instruments, appliances, etc. They will devote a portion of their lectures to Clinical Midwifery, taking as illustrations such cases of interest as may occur in the lying-in ward from time to time. The senior students will each, in rotation, have opportunities for the study of Practical Obstetrics at the bedside.

**REPORT OF THE CLINIC ON OBSTETRICS AND GYNECOLOGY OF THE HOSPITAL OF THE CITY AND COUNTY OF SAN FRANCISCO, UNDER THE CHARGE OF PROFESSOR R. BEVERLY COLE, PROFESSOR CHARLES A. VON HOFFMANN AND DR. JAMES F. MCCONE, OF THE UNIVERSITY OF CALIFORNIA, FROM APRIL 30, 1899, TO APRIL 30, 1900.**

Undiagnosed.....	7	Retroflexion.....	6
Hysteria.....	2	Anteflexion.....	2
Neurasthenia.....	5	Acute Endometritis.....	3
Uremia.....	2	Chronic Endometritis.....	3
Syphilis.....	9	Chronic Metritis.....	3
Constipation.....	3	Uterine Polypus.....	1
Intestinal Obstruction.....	1	Uterine Fibroids.....	4
Intestinal Neurosis.....	1	Carcinoma of Uterus.....	10
Sapremia.....	1	Atrophic Endometritis.....	1
Septicemia.....	5	Hemorrhagic Endometritis.....	7
Abdominal Hernia.....	2	Perimetritis.....	3
Lacerated Wound of Labium Maj.....	1	Parametritis.....	1
Abscess of Labium Majorum.....	1	Pelvic Cellulitis.....	4
Varicose Veins of Labium Major.....	1	Subinvolution.....	1
Edema of Labium Majorum.....	1	Procedentia Uteri.....	2
Vulvo-Vaginal Abscess.....	1	Ectopic Pregnancy.....	1
Sarcoma of Clitoris.....	1	Placenta Previa.....	1
Acute Cystitis.....	2	Threatened Abortion.....	3
Gonorrhoeal Vulvo-Vaginitis.....	8	Abortion.....	10
Atresia of Vagina.....	1	Retained Secundines.....	4
Ischio-Rectal Abscess.....	1	Salpingitis.....	14
Fissure in Ano.....	1	Pyosalpinx.....	4
Hemorrhoids.....	3	Hydrosalpinx.....	1
Perineal Fistula.....	1	Hematosalpinx.....	1
Lacerated Perineum.....	8	Ovaritis.....	14
Chronic Proctitis.....	1	Cystic Ovaritis.....	12
Endocervicitis.....	7	Sarcoma of Ovary.....	1
Lacerated Cervix.....	10	Dermoid Cyst.....	1
Carcinoma of Cervix.....	2	Appendicitis.....	3
Undeveloped Uterus.....	1	Tubercular Enteritis.....	1
Dysmenorrhoea.....	1	Fibroid of Breast.....	1
Retroversion of Uterus.....	3	Thrombosis of Saphenous Vein.....	1

SARTON TEMPLE POPE, M. D., Interne.

## OUT-PATIENT CLINICS

The Faculty has organized a Free Dispensary Clinic, which is held at 155 New Montgomery Street. This clinic is located in the heart of a thickly populated district, where clinical material of every description is extremely abundant. The clinical rooms are large and airy, and provided with every facility for the successful demonstration and treatment of disease.

A full staff of clinicians and assistants has been appointed, and clinics are held daily throughout the year. Cases applying for treatment are classified according to their diseases and assigned to the different clinicians.

During the sessions of the College, every advanced student will have an opportunity to observe and attend personally a large number of cases, under the direct supervision of the clinical staff.

The advantage of an out-patient clinic lies in the fact that the varieties of cases presented for observation are, to a great extent, those seen in office practice. Combined with hospital work, the Dispensary Clinic forms an invaluable system of practical training for the student.

A fully equipped pathological and bacteriological laboratory is conducted in conjunction with the clinic, wherein examinations are made of urine, sputum, abnormal growths, etc., so that the student may obtain simultaneously a view of the pathological and of the clinical aspect of disease processes.

An obstetrical bureau has been established where indigent women may make application for attendance at their own homes during confinement. The clinician in charge of this department will assign cases in rotation to students of the Fourth-Year Class.

## OUT-PATIENT DEPARTMENT.

REPORT OF THE UNIVERSITY OF CALIFORNIA OUT-PATIENT DEPARTMENT FOR  
THE YEAR ENDING APRIL 30, 1900.

	Total Visits.
Medical Clinic.....	2786
Eye and Ear.....	2857
Nose and Throat.....	1052
Neurological.....	592
Gynecological.....	1983
Dermatological.....	2500
Surgical.....	3706
Orthopedic.....	878
Genito-Urinary.....	1728
Total.....	18082
Total Number of New Patients Treated.....	4205

Surgical Clinic, No. 1.

DR. HAROLD BRUNN AND DR. CHAS. G. LEVISON.

Surgical Cases Treated from April 30, 1899, to April 30, 1900.

HEAD AND NECK.

Abscess, Cervical .....	2	Furuncle .....	4
" Face .....	1	Lymphoma, Malignant .....	2
Adenitis, Cervical .....	6	Phlegmon of Neck .....	2
Carbuncle of Neck .....	3	Tumor of Neck and Axilla .....	4
Contusions, Head .....	5	Wounds—	
Cysts of Neck, Sebaceous .....	2	Incised Scalp .....	10
" Scalp and Face .....	6	Infected Scalp .....	5
Epithelioma of Lip .....	3	" Eye .....	2
Erysipelas of Face .....	2	Lacerated Scalp .....	5
Fracture, Nasal Bones .....	1	" Ear .....	1

UPPER EXTREMITY.

Abscess, Arm .....	1	Fracture, Colle's .....	10
" Axilla .....	2	" Ulna and Radius .....	1
" Hand and Fingers .....	10	" Humerus .....	6
Burn, Arms .....	3	" Thumb .....	2
" Hand and Fingers .....	3	" Clavicle .....	4
Cellulitis of Arm .....	2	Ganglion, Hand and Wrist .....	4
Contusion of Arm .....	4	Paronychia .....	2
" Shoulder .....	5	Sprain, Arm and Elbow .....	5
" Elbow .....	1	" Hand, Wrist and Fingers .....	4
Dislocation, Humerus .....	2	Tenovaginitis, Forearm .....	2
Dupuytren's Contraction .....	1	Wounds, Stab of Arm .....	1
Foreign Body in Arm and Hand .....	2	Infected Wound of Arm, Hand	
Felon .....	5	and Fingers .....	10
Finger Amputation .....	3	Wrist Tuberculosis .....	2

CHEST AND BACK.

Burn of Back .....	3	Contusion of Back and Chest .....	1
Carbuncle of Back .....	1	Fracture of Ribs .....	4
Carcinoma of Breast .....	2	Sprain of Back .....	1
Contusion of Ribs .....	4	Wounds of Chest .....	2

ABDOMEN AND PELVIS.

Abscess, Ischio-Rectal .....	5	Hæmorrhoids, External .....	5
Condylomata Ani .....	2	" Internal .....	6
Fissure in Ano .....	2	Hernia, Inguinal .....	2
Fistula, External Incomplete .....	4		

LOWER EXTREMITY.

Abscess, Leg .....	2	Phlebitis, Saphenous Vein .....	1
Ankylosis of Knee .....	4	Sprain, Ankle .....	5
Bubo .....	4	" Knee .....	2
Burn, Leg .....	5	" " .....	1
" Foot .....	6	Synovitis Tubercular, Knee .....	4
Contusion, Knee .....	2	Syphilis of Tibia .....	1
" Foot .....	7	Tendo Achillis Ruptured .....	2
Crushed Ankle .....	3	Tibia Necrosis .....	10
Fracture, Metatarsus .....	3	Varicose Veins .....	12
" Patella .....	2	Ulcers, Simple .....	4
Hydrocele of Cord .....	3	" Specific .....	13
Ingrowing Toe-Nail .....	2	" Varicose .....	3
Phlegmon of Foot .....	5	Wounds—	
Periostitis of Tibia .....	4	Infected Wounds of Leg .....	4
	2	" " Knee .....	

## Surgical Clinic, No. 2.

DR. J. P. H. DUNN.

## HEAD AND NECK.

Abscess of Neck .....	4	Furuncle of Neck .....	2
"    Jaw .....	2	Hæmatoma of Forehead .....	1
Adenitis Cervical. ....	3	Tumor of Neck .....	2
Burns of Face, Powder .....	4	Ulcer of Neck .....	1
Carbuncle of Neck .....	2	Wound, Incised Scalp .....	2
Contusions of Face .....	2	"    Lacerated Scalp .....	12
"    Head .....	1	"    "    Face, Lip and	
Cysts of Scalp & Face, Sebaceous	4	Brow .....	20
Cysts of Neck .....	1	Wound, Lacerated Ear .....	2
Epithelioma of Face .....	2	Infected Scalp Wound .....	3
Fracture of Nasal Bones .....	1	"    Face .....	4
"    Skull .....	2		
"    Inferior Maxilla .....	1		78

## UPPER EXTREMITY.

Abscess of Arm .....	1	Gangrene of Thumb .....	1
"    Axilla .....	3	Iodoform Dermatitis .....	1
"    Hand and Finger .....	6	Lipoma of Arm .....	1
Burns of Arm .....	2	Lymphangitis of Arm .....	2
"    Hand and Fingers .....	8	Paronychia .....	6
Bursitis, Olecranon .....	3	Phlegmon of Arm .....	2
Carbuncle of Arm .....	1	"    Hand and Finger .....	5
Cellulitis .....	3	Sprain of Shoulder .....	3
Contracted Fascia of Arm .....	1	Sprain of Wrist .....	6
Contusion of Shoulder .....	3	Sprain of Thumb and Finger .....	2
"    Elbow .....	2	Teno Vaginitis .....	1
"    Arm and Hand .....	4	Ulcers of Forearm and Hands .....	2
Crushed Fingers .....	5	Wound, Stab of Arm .....	1
Dislocated Thumb .....	2	"    Infected, of Arm, Hand,	
Fracture, Colle's .....	3	and Finger .....	7
"    Radius .....	2	"    Lacerated, of Arm, Hand,	
"    Ulna .....	1	and Finger .....	10
"    Humerus .....	1	"    Incised, of Arm, Hand,	
"    Clavicle .....	3	and Finger .....	2
"    Hand and Finger .....	5		
Furuncle of Arm .....	2		115
Ganglion of Hand and Wrist .....	2		

## CHEST AND BACK.

Carbuncle of Back .....	2	Sprain of Back .....	5
Carcinoma of Breast .....	1	Traumatic Pleurisy .....	1
Contusion of Chest and Ribs .....	7		
Fractured Ribs .....	1		17

## ABDOMEN AND PELVIS.

Fistula in Ano .....	2	Lipoma of Buttocks .....	1
Furuncle of Buttocks .....	1	Lipoma of Abdomen .....	1
Hæmorrhoids .....	6		
Inguinal Hernia .....	4		15

LOWER EXTREMITY.

Abscess of Leg.....	2	Tuberculosis of Knee.....	1
Amputation of Toe.....	1	"    Foot.....	1
Burn of Leg.....	3	Varicose Veins.....	5
"    of Foot.....	2	Ulcers—	
Bursitis, Prepatellar.....	1	Chronic of Leg.....	7
Contusion of Hip.....	1	Varicose ".....	8
Contusion of Thigh.....	1	Specific ".....	2
Fracture of Toes.....	2	Simple ".....	4
Furuncle of Leg.....	1	Traumatic ".....	4
Ingrowing Toe-Nail.....	2	Wounds—	
Periostitis of Instep.....	2	Infected of Leg.....	2
Neuralgia of Stump.....	1	Contused ".....	4
Phlegmon of Leg.....	2	Lacerated ".....	6
Sprain of Ankle.....	3	Lacerated of Knee.....	2
"    Knee.....	1		
Syphilitic Gumma of Leg.....	2		68

Head and Neck.....	78
Upper Extremity.....	115
Chest and Back.....	17
Abdomen and Pelvis.....	15
Lower Extremity.....	68
Total.....	293

Genito-Urinary Clinic.

DRS. JOHN M. WILLIAMSON AND JOHN C. SPENCER.

ASSISTANTS: DRS. CECIL M. ARMISTEAD AND GEORGE H. RICHARDSON.

Balanitis.....	9	Orchitis, Traumatic.....	2
Balano-Posthitis.....	7	Pediculosis Pubis.....	6
Bubo, Idiopathic.....	6	Prostatitis, Acute.....	8
"    Chancroidal.....	28	"    Chronic.....	13
"    Gonorrheal.....	6	Prepuce, Redundant.....	1
Chancroids.....	41	Prostate, Hypertrophy of.....	8
Cystitis, Acute.....	12	Phimosis.....	15
"    Chronic.....	6	Paraphimosis.....	5
Epididymitis.....	22	Syphilis, Primary.....	21
Gonorrhea, Acute.....	101	Syphilophobia.....	2
"    Chronic.....	49	Scrotum, Chancroid of.....	3
"    Recurrent.....	12	Spermatocele.....	4
"    Subacute.....	25	Urethritis, Simple.....	17
Gonorrheal Arthritis.....	2	"    Chronic Posterior.....	15
Hydrocele.....	12	Urethral Stricture.....	23
Herpes Progenitalis.....	8	Urinary Incontinence.....	5
Hypospadias, Congenital.....	6	Vesiculitis, Seminal.....	3
Hypochondriasis, Sexual.....	7	Varicocele.....	10
Lacerated Frenum.....	3	Verruca.....	1
Meatus, Congenital Contract.....	11	Vesical Spasm.....	1
Nocturnal Emissions.....	8		
Neuralgia of Spermatic Cord.....	4		
Orchitis, Acute Specific.....	7		535



## Medical Out-Patient Clinic.

## SECTION I.

CHIEF OF CLINIC, DANIEL E. F. EASTON, M. D.; ASSISTANT, SANFORD BLUM, M. D.

Classification of Cases from April 30, 1899, to April 30, 1900.

## DISEASES OF CIRCULATORY SYSTEM.

Arterio Sclerosis.....	2	Myocarditis.....	8
Mitral Stenosis.....	7	Fatty Heart.....	3
Mitral Regurgitation.....	36	Cardiac Asthma.....	3
Aortic Stenosis.....	7	Aneurism of Aorta.....	2
Aortic Regurgitation.....	8	Chlorosis.....	6
Mitral Regurgitation and Aortic Regurgitation.....	4	Vertigo.....	4
Endocarditis.....	1	Cardia Dextra & Fibroid Phthisis.	1
Pericarditis.....	2		84

## DISEASES OF RESPIRATORY SYSTEM.

Acute Bronchitis.....	35	Emphysema.....	2
Sub-Acute Bronchitis.....	5	Asthma, Bronchial.....	5
Chronic Bronchitis.....	20	Emphysema and Asthma.....	3
Capillary Bronchitis.....	2	Coryza.....	2
Lobar Pneumonia.....	2	Acute Laryngitis.....	2
Traumatic Pneumonia.....	1	Acute Pharyngitis.....	1
Phthisis Pulmonalis.....	51		
Fibroid Phthisis.....	3		134

## DISEASES OF DIGESTIVE SYSTEM.

Acute Tonsillitis.....	4	Passive Congestion of Liver.....	1
Sub-Acute Gastritis.....	13	Catarrh of Gall Bladder.....	1
Chronic Gastritis.....	18	Cholelithiasis.....	2
Gastralgia.....	6	Hepatitis Syphilitica.....	1
Gastric Dilation.....	3	Dysentery.....	1
Hyperacidity.....	6	Chronic Constipation.....	12
Atonic Dyspepsia.....	3	Hypertrophic Cirrhosis of Liver..	2
Flatulent Dyspepsia.....	6	Acute Diarrhoea.....	4
Gastric Ulcer.....	1	Tænia Mediocanellata.....	5
Colitis.....	8	Ascaris Lumbricoides.....	2
Ileo-Colitis.....	1	Soor.....	1
Acute Enteritis.....	1	Gastric Carcinoma.....	2
Chronic Enteritis.....	1	Hepatic Carcinoma.....	4
Tubercular Enteritis.....	1		
Tubercular Peritonitis.....	2		112

## DISEASES OF NERVOUS SYSTEM.

Trifacial Neuralgia.....	2	Alcoholic Neuritis.....	1
Occipital Neuralgia.....	1	Multiple Neuritis.....	2
Neurasthenia.....	8	Muscular Contracture.....	1
Hysteria.....	1	Torticollis.....	1
Pressure Paralysis.....	2		
Tabes Dorsalis.....	3		21

## DISEASES OF GENITO-URINARY SYSTEM.

Acute Parenchymatous Nephritis	1	Chronic Cystitis.....	1
Chronic Parenchymatous Nephritis	6	Nocturnal Enuresis.....	2
Chronic Interstitial Nephritis.....	10		
Phimosis.....	1		23
Acute Cystitis.....	2		

SPECIFIC INFECTIOUS DISEASES.

La Grippe.....	14	Syphilis.....	1
Malarial Infection.....	7		
Typhoid Fever.....	3		26
Septicæmia.....	1		

CONSTITUTIONAL DISEASES.

Diabetes Insipidus.....	4	General Debility.....	3
Diabetes Mellitus.....	2	Gout.....	1
Acute Articular Rheumatism.....	6	Obesity.....	1
Chronic Articular Rheumatism.....	32	Lead Colic.....	1
Muscular Rheumatism.....	16	Cancer of Breast.....	1
Lumbago.....	5		
Sciatica.....	5		77

INTOXICATIONS.

Acute Alcoholism.....	10	Chloral Habit.....	1
Chronic Alcoholism.....	5		
Opium Habit.....	2		18

UNCLASSIFIED.

Synovitis.....	1	Sprain of Shoulder.....	2
Eczema.....	1	Muscular Bruise.....	1
Pregnancy.....	1		
Sprain of Back.....	2		8

Total Number of Cases..... 503

Medical Out-patient Clinic.

SECTION II.

CHIEF OF CLINIC, J. MORA MOSS, M. D.

Tabulation of New Cases from April 30, 1899, to April 30, 1900.

SPECIFIC INFECTIOUS DISEASES.

Influenza.....	1	Tuberculosis of the Lungs.....	41
Malaria.....	7	“ “ Rectum.....	1
Parotitis.....	1	Typhoid Fever.....	1
Scarlatina.....	1		

CONSTITUTIONAL DISEASES.

Arthritis Deformans.....	1	Rheumatism, Acute Articular.....	12
Chronic Gout.....	1	“ Chronic, Subacute..	7
Purpura Hemorrhagica.....	1	“ Muscular.....	24

DISEASES OF THE DIGESTIVE TRACT.

Tonsillitis, Acute.....	2	Appendicitis.....	7
Gastritis, Acute Catarrhal.....	29	Typhlitis.....	2
“ Chronic Catarrhal.....	32	Constipation, Chronic.....	1
Gastric Carcinoma.....	3	Enteroptosis.....	1
Gastric Ulcer.....	1	Tænia.....	3
Gastro-Enteritis, Acute.....	4	Hemorrhoids.....	2
Nervous Dyspepsia.....	2	Catarrhal Jaundice.....	2
Enteritis, Acute Catarrhal.....	2	Cholelithiasis.....	1
“ Chronic Catarrhal.....	3	Hepatic Carcinoma.....	1
Enteralgia.....	1	Pancreatic Cyst.....	1

## DISEASES OF THE RESPIRATORY SYSTEM.

Bronchial Asthma.....	5	Emphysema.....	4
Bronchitis, Acute.....	45	Pleuritis, Sicca.....	5
"    Subacute and Chronic.....	18	"    Sero-fibrinous.....	1
Coryza.....	3	Pneumonia, Croupous.....	1

## DISEASES OF THE HEART AND BLOOD-VESSELS.

Endocarditis, Acute.....	1	Simple Hypertrophy.....	3
Chronic Valvular Disease—		Pericarditis.....	2
Mitral Regurgitation.....	8	Arrhythmia.....	1
Aortic Regurgitation.....	1	Angina Pectoris.....	1
Aortic and Mitral Regurgitation.....	2	Aneurisms—	
Mitral Stenosis.....	2	Aortic and Innominate.....	1
Fatty Heart.....	1	Aortic.....	1
Chronic Myocarditis.....	4	Arteriosclerosis.....	5
Cardiac Dilatation.....	2	Varicose Veins.....	4

## DISEASES OF THE BLOOD AND THYROID GLAND.

Chlorosis.....	4	Exophthalmic Goitre.....	2
Chlorosis Rubra.....	1	Fibrous Goitre.....	1

## DISEASES OF THE KIDNEYS AND BLADDER.

Cystitis, Acute.....	2	Nephritis, Acute.....	4
"    Chronic.....	5	"    Chronic Interstitial... ..	1
Irritable Bladder.....	2	Renal Calculus.....	1
Diurnal Enuresis.....	2		

## DISEASES OF THE NERVOUS SYSTEM.

Amyotrophic Lateral Sclerosis....	1	Neuralgias—	
Cerebral Hemorrhage.....	1	Sciatic.....	6
Hemorrhage in Pons Varolii.....	1	Sacro-Coxalgia.....	8
Hemicrania.....	3	Metatarsalgia.....	2
Hypochondriasis.....	5	Reflex Dermalgia.....	1
Hysteria.....	12	Syringomyelia.....	1
Neuralgias—		Chronic Generalized Syphilitic	
Intercostal.....	14	Spinal Meningitis.....	1
Trigeminal.....	5		

## INTOXICATIONS.

Alcohol.....	4	Morphine Habit.....	1
Autointoxication.....	1	Mercury.....	2
Lead.....	2	Tobacco.....	1

## UNCLASSIFIED.

Cervical Adenitis.....	1	Malingers.....	2
Disorders of Pregnancy.....	1	No Diagnosis Made.....	11
Hodgkin's Disease.....	1	Refused Examination.....	5
Senility.....	2		

Total..... 440

This does not include cases treated during the year whose first visit was made prior to May 1st, 1900.

Medical Out-patient Clinic.

SECTION III.

CHIEF OF CLINIC, CLARENCE QUINAN, M. D.

For period from Sept. 25th, 1899, to May 9th, 1900, inclusive.

CLASSIFICATION OF CASES.

SPECIFIC INFECTIOUS DISEASES.

Typhoid.....	1	Syphilis of Bones.....	2
Pertussis.....	1	“ Visceral.....	2
Influenza.....	2	“ Primary.....	1
Malaria.....	3	Gonorrhœa.....	1
Syphilis, Cerebro-Spinal.....	7	Tuberculosis of Lungs and Pleura	17
Parotitis.....	1		

CONSTITUTIONAL DISEASES.

Acute Articular Rheumatism....	5	Prolonged Lactation, Cause of	
Chronic Articular Rheumatism....	2	Symptoms.....	1
Muscular Rheumatism.....	6		

DISEASES OF DIGESTIVE SYSTEM.

Acute Pharyngitis.....	1	Ulcer of Stomach.....	1
Follicular Tonsillitis.....	1	Acute Gastro-Enteritis.....	1
Acute Gastritis.....	1	Acute Catarrhal Enteritis.....	2
Chronic Gastritis.....	2	Appendicitis.....	1
Motor Insufficiency.....	3	Impaction of Feces.....	2
Cancer of Stomach.....	2	Cirrhosis of Liver, Alcoholic.....	2
Neuroses of Stomach.....	4		

DISEASES OF RESPIRATORY SYSTEM.

Acute Catarrhal Laryngitis.....	1	Emphysema and Chron. Bronchitis	4
Acute Bronchitis.....	3	Fibrinous Pleurisy.....	4
Subacute and Chronic Bronchitis.	15	Serofibrinous Pleurisy.....	2
Cardiac Asthma.....	1	Broncho-Pneumonia.....	2
Anthraxis.....	1	Lobar Pneumonia.....	1

DISEASES OF CIRCULATORY SYSTEM.

Chronic Valvular Disease—		Chronic Myocarditis, Fibrinous	
Mitral Stenosis.....	1	and Fatty.....	4
Mitral Stenosis & Insufficiency.	5	Arterio Sclerosis.....	3
		Aneurism of Right Iliac.....	1

DISEASES OF THE BLOOD.

Primary Anæmia, Chlorosis.....	1	Secondary Anæmia.....	2
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DISEASES OF THE KIDNEYS AND BLADDER.

Movable Kidney.....	1	Chronic Diffuse Nephritis.....	4
Chronic Diffuse Parenchymatous		Pyelitis.....	1
Nephritis.....	1	Cystitis.....	1

DISEASES OF THE NERVOUS SYSTEM.

Supra-Orbital Neuralgia.....	1	Lumbo-Sacral Neuritis.....	5
Intercostal Neuralgia.....	8	Neurasthenia, General.....	2
Peripheral Neuritis.....	1	“ Sexual.....	5
Alcoholic Neuritis.....	1	“ of Climacteric.....	1

## INTOXICATIONS.

Chronic Alcohol.....	5	Acute Ptomaine.....	1
Tobacco.....	2		

## NOT CLASSIFIED.

Data Incomplete.....	35
Total.....	201

**Diseases of the Skin.**—The clinic for diseases of the skin will be utilized as far as possible for the study of pathology. Disease processes, which in many other branches of medicine are hidden, can be actually seen in a clinic for diseases of the skin. In order to utilize the material to the fullest extent the classes are divided, and Dr. A. B. Grosse takes the third-year class and demonstrates diseases of the skin as much as possible from a physiological and anatomical standpoint, while Prof. D. W. Montgomery takes the fourth-year class and lays particular stress on the pathology.

**Diseases of the Skin Out-Patient Clinic,**

PROF. DOUGLASS W. MONTGOMERY.

ASSISTANTS: A. B. GROSSE, M. D., ERNEST PRING, M. D.

Acne.....	13	Keloid .....	1
Alopecia .....	1	Leucoplasia of Mouth.....	1
"    Areata .....	3	"    Tongue .....	1
Atrophia Senilis.....	1	"    Lower Lip .....	1
Balanitis .....	3	Melium .....	1
Chancroids, or Undetermined Venereal Sores.....	49	Papilloma .....	7
Cimex Lectularius.....	2	Pediculosis Capitis.....	20
Comedo.....	5	"    Corporis .....	7
Cutaneous Horn .....	1	Pernio .....	2
Clavus .....	2	Pruritus.....	9
Dermatitis Venenata .....	3	"    Ani .....	1
Ecze'ma .....	76	Psoriasis .....	14
Epithelioma .....	5	Pityriasis Rosea.....	2
Ecthyma .....	3	Pulex Irritans.....	1
Erysipelas.....	2	Purpura Hemorrhagica.....	1
Erythema.....	1	Pyogenic Infection.....	12
"    Nodosum.....	2	Rosacea .....	3
Excoriation of Prepuce .....	1	Scabies.....	16
Folliculitis.....	2	Scleroderma .....	1
"    Mercurialis.....	1	Seborrhea .....	4
Furunculosis .....	4	Seborrheic Ecze'ma.....	7
Herpes Simplex.....	12	Stomatitis.....	2
"    Zoster .....	6	Sycosis.....	6
Hydrargyrim.....	1	Syphilide, Early.....	69
Impetigo, Contagiosa.....	18	"    Late .....	21
		Syphilitic Defluvium of Toe Nails .....	1

Teleangiectasis .....	2	Tylosis Plantaris.....	1
Traumatism of Tongue, Bite.....	1	Ulcus.....	10
Trichophytosis Corporis.....	5	Urticaria.....	10
“ Capitis.....	1	Unclassified.....	28
“ Cruris.....	1	Varicella.....	2
Tinea Versicolor.....	4	Wen.....	1

# Ophthalmological and Otological Clinic,

From May 1, 1899, to May 1, 1900.

PROF. GEO. H. POWERS.

CHIEF OF CLINICS, DR. GEO. H. MERRITT.

ASSISTANTS: HUGH LAGAN, M. D., R. H. ORR, M. D., GRACE FEDER, M. D.

## DISEASES OF THE EYE.

Conjunctivitis, Acute .....	6	Luxatio Lentis .....	3
“ Catarrhalis.....	45	Optic Neuritis.....	3
“ Follicularis.....	33	“ Atrophy.....	5
“ Phlyctenularis.....	23	Amblyopia Congenital.....	7
“ Purulent.....	9	“ Toxic.....	4
“ Trachomatous.....	5	Retinitis.....	7
Ophthalmia Neonatorum.....	3	Retinal Detachment.....	3
Keratitis Parenchymatous.....	9	Muscae Volitantes.....	3
“ Phlyctenularis.....	5	Hypermetropia.....	17
Ulcer of the Cornea.....	22	Myopia.....	7
Abscess of the Cornea.....	3	Presbyopia.....	15
Hypopyon.....	4	Myopic Astigmatism.....	8
Corneal Scar.....	14	Hypermetropic Astigmatism.....	17
Panus.....	2	Strabismus Convergens.....	7
Foreign Bodies.....	23	“ Divergens.....	2
Scleritis.....	1	Paresis Motor Oculi.....	1
Glaucoma Chronica.....	1	“ Rectus Superior.....	1
Choroiditis Chronica.....	6	“ “ Externus.....	1
Iritis Simplex.....	2	Stenosis of the Lachrymal Duct.....	19
“ Specifica.....	15	Dacryocystitis.....	3
Gumma of the Iris.....	3	Lid Nævus.....	1
Iritis Rheumatica.....	5	Ptoxis.....	1
“ Traumatica.....	2	Phthisis Bulbi.....	1
Irido Cyclitis.....	1	Blepharitis Marginalis.....	26
“ Donesis.....	3	Hordeolum.....	6
“ Dialysis.....	1	Chalazion.....	26
Staphyloma Anterior.....	3	Entropion.....	4
“ Posterior.....	8	Ectropion.....	1
Cataracta Immatūra.....	7	Nystagmus.....	1
“ Matura.....	3	Pterygium.....	5
“ Stellata.....	5	Traumatism.....	2
“ Senilis.....	5		
“ Congenital.....	2		486

## OPERATIONS.

Cataract.....	5	Tenotomy.....	3
Removal of Foreign Bodies.....	23	Removal of Eye.....	1
Incision, Hordeolum.....	6	Needling.....	2
“ Chalazion.....	26	Entropion.....	6
“ Lachrymal Duct.....	7		
Expression of Trachoma Follicles.....	2		84
Grattage.....	3		

## DISEASES OF THE EAR.

Eczema Auricle.....	3	Chronic Catarrhal Deafness.....	11
“ Canal.....	5	Affection of the Auditory Nerve..	3
Furunculosis.....	5	Inspissated Cerumen.....	40
Aural Polypi.....	7	Perforated Tympanum.....	9
Otitis Acute.....	5	Mastoiditis.....	1
“ Purulent.....	12	Myringitis.....	2
“ Media Catarrhalis.....	22		
“ “ Sicca.....	17		142

## OPERATIONS.

Removal of Aural Polypi..	7	Paracentesis.....	2
Incision Furunculi.....	3		

## Nose and Throat Clinic.

From April 30, 1899, to April 30, 1900.

PROF. GEORGE H. POWERS.

ASSISTANT, GARDNER P. POND, M. D.; CLINICAL CLERK, GRACE SIMON, M. D.

## DISEASES OF THE NOSE.

Rhinitis Simplex.....	6	Enlarged Turbinated.....	49
“ Atrophica.....	10	Atrophied Turbinated.....	1
“ Hypertrophica, Chronic.....	52	Empyema, Frontal Sinus.....	1
“ Specifica.....	4	Fractured Septum.....	1
Ozæna.....	1	Foreign Body in Nostril.....	1
Empyema, Antrum, Highmore...	2		
Polypi Nasi.....	15	Total.....	156
Deflected Septum.....	13		

## OPERATIONS ON NOSE.

Removal Nasal Polypi.....	15	Removal of Turbinates.....	13
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## DISEASES OF THE THROAT.

Pharyngitis Simplex.....	26	Tonsillitis, Hypertrophica.....	44
“ Sicca.....	4	“ Specifica.....	9
“ Chronica.....	6	Peri-tonsillar Abscess.....	5
“ Specifica.....	6	Adenoids.....	45
Elongated Uvula.....	4	Vocal Cords, Tubercular.....	2
Bifurcated Uvula.....	1	Palate, Specific Fissure.....	2
Laryngitis, Acuta.....	10	Epithelioma.....	1
“ Specifica.....	1	Hysterical Aphonia.....	1
“ Tubercular.....	1		
Tonsillitis, Follicula.....	6	Total.....	174

## OPERATIONS ON THROAT.

Removal, Adenoids.....	32	Amputation Uvula.....	3
“ Tonsils.....	27		

Obstetrical and Gynecological Clinic.

PROF. CHAS. A. VON HOFFMANN and

DR. JAMES F. MCCONE.

Abscess of Liver.....	1	Fibroid of Uterus.....	3
Abscess of Suture foll. Operation.....	2	Fissure of Anus.....	2
Abscess of Bartholini's Gland.....	3	Gonorrhoea.....	19
Abscess of Tube and Ovary.....	1	Hæmatoma of Vulva.....	2
Abortions.....	2	Hemorrhoids.....	5
Amenorrhoea.....	2	Hernia.....	2
Anæmia.....	2	Hysteria.....	2
Bartholinitis.....	2	Infantile Uterus.....	2
Bubo.....	1	Laceration of Perineum.....	17
Carcinoma of Uterus.....	6	Laceration of Cervix.....	23
Caruncle of Urethra.....	4	Lipoma of Groin.....	1
Chancere of Vulva.....	3	Menopause.....	3
Chancroid.....	4	Movable Kidney.....	1
Cervicitis.....	1	Myosarcoma.....	1
Chlorosis.....	3	Obesity.....	2
Colitis.....	1	Oophoritis.....	6
Cystitis.....	1	Parametritis, Atrophica.....	3
Cystocele.....	4	Perimetritis.....	1
Cysts of Ovary.....	5	Pelvic Cellulitis.....	1
Cyst, Dermoid.....	1	Pelvic Peritonitis.....	1
Cyst, Papillary Cyst of Ovary.....	1	Pregnancy.....	28
Displacements of Uterus—		Prolapse of Uterus.....	3
Anteversión.....	2	Prolapse of Ovary.....	11
Anteflexion.....	7	Pyosalpinx, Double.....	1
Retroversion.....	19	Rectocele.....	3
Retroflexion.....	6	Salpingitis.....	5
Retroadisplacement.....	5	Syphilis.....	11
Eczema of Vulva.....	1	Ulcers of Cervix, Vulva and Anus.....	7
Endocervicitis.....	14	Vaginitis, Simple.....	9
Endometritis, Simple.....	16	Vaginitis, Senile.....	5
Endometritis, Hemorrhagic.....	2		

Neurological Clinic.

CHIEF OF CLINIC: EDWARD VON ADELUNG, B. S., M. D.

From April 30, 1899, to April 30, 1900.

Spinal Cord—		Pseudo-Muscular Hypertrophy.....	1
Tabes.....	8	Neuralgias.....	10
Multiple Sclerosis.....	4	Trigeminal.....	9
Syringo-Myelia.....	1	Intercostal.....	1
Kyphosis.....	1	Facial Paralysis.....	6
Nerves—		Rheumatic.....	4
Neuritis.....	3	Traumatic.....	2
Simple.....	2	Ophthalmoplegia.....	1
Alcoholic.....	1	Brain—	
Polyneuritis.....	2	Cerebral Hemorrhage.....	1
Sciatic Neuralgia or Neuritis.....	2	Cerebral Palsies of Childhood.....	1
Paralyses and Pareses.....	7	Cerebral Thrombosis.....	1
Post-neuritis.....	2	Functional, Toxic, etc.—	
Post-diphtheritic.....	2	Neurasthenia.....	21
Traumatic.....	1	Epilepsy.....	5
Pressure.....	1	Grand-Mal.....	2
Bladder.....	1		



Epilepsy—			Intestinal.....	1
Petit-Mal.....	1		Insomnia.....	1
Alcoholic.....	2		Amnesic Aphasia.....	1
Alcoholism.....	2		Migraine.....	1
Hysteria.....	3		Mental—	
Male.....	1		Hypochondria.....	4
Female.....	2		Melancholia.....	1
Hysterical Hemiplegia.....	1		Imbecility.....	2
Paralysis Agitans.....	1		Morbid Fears and Impulses.....	1
Simple Intentional Tremor.....	1		Mania.....	1
Senile Tremor.....	1		Periodic Mania.....	1
Chorea, Sydenham's.....	1		Post-Alcoholic Hallucinations.....	2
Hemichorea.....	1		Referred to Other Clinics.....	3
Stuttering.....	1		Undiagnosed.....	5
Post-Typhoid Twitches.....	1			
Headaches.....	3			
Gastric.....	2		Total Number of Cases.....	114

### Orthopedic Clinic.

Report of Cases from April 30, 1899, to April 30, 1900.

CHIEF OF CLINIC: SAMUEL J. HUNKIN, M. D.

	New Cases.	Cases Continued From Last Year.	Total Number of Cases Treated.	Under 3 Years of Age.	From 3 yrs. to 10 yrs.	From 10 yrs. to 20 yrs.	Over 20 Years.	Discharged Cured.	Discharged Relieved.	Referred or Sent to Children's Hospital.	Not Treated.	Died.	Cases Continued.
Vertebral Tuberculosis.....	11	18	29	4	22	3	..	..	..	1	2	..	26
Hip-Joint Tuberculosis.....	5	15	20	..	9	10	1	..	..	1	1	..	18
Knee-Joint Tuberculosis.....	7	6	13	..	6	5	2	2	..	..	..	..	11
Ankle-Joint Tuberculosis.....	1	..	1	1	1	..	..	..	1	..	..	..	..
Wrist-Joint Tuberculosis.....	1	..	1	..	1	..	..	..	..	..	..	..	1
Antero-Polio-Myelitis.....	2	2	4	..	3	1	..	..	..	..	..	1	3
Scoliosis.....	2	6	8	..	8	..	..	..	..	..	1	..	7
Torticollis.....	1	..	1	..	1	..	..	..	..	1	..	..	..
Genu Valgum.....	3	..	3	1	1	1	..	..	..	1	..	..	2
Talipes Valgus.....	7	5	12	1	5	5	1	1	2	..	..	..	9
Talipes Varus.....	1	..	1	1	..	..	..	..	..	..	..	..	1
Congenital Dislocation of Hips.....	2	..	2	1	1	1	..	..	..	..	2	..	..
Miscellaneous.....	8	3	11	3	2	3	3	3	..	1	3	..	4
	51	55	106	14	47	38	7	6	3	4	10	1	85

# CLINICAL LABORATORY.

This Laboratory is completely equipped with all apparatus necessary in medical chemistry, and with microtomes, incubator, several sets of blood counters, hemometers, microscopes, etc.

It is for the exclusive use of the clinicians and members of the Senior Class, who are allowed free access to all apparatus.

The following examinations have been made during the past year:

## Report of Examinations.

April 30, 1899, to April 30, 1900.

HENRY A. L. RYFKOGEL, Director of Clinical Laboratory.

Examination of Urine.....	380	Examination of Semen.....	3
“ Sputum.....	150	“ Hair and Skin	
“ Tissue.....	50	“ Scrapings....	12
“ Gastric Contents. 14		“ Pus.....	25
“ Urethral Dischge. 90		“ Blood.....	60
“ Vaginal Dischge. 65			
“ Milk.....	6		
“ Cultural.....	20		875

## MUSEUM.

The Museum now contains about two thousand specimens. In 1899, Dr. R. A. McLean presented his valuable collection of three hundred specimens to the Medical Department of the University.

All the material is now labeled and catalogued, and students are admitted on application to the Janitor or Assistant Curator.

H. A. L. RYFKOGEL, M. D., Assistant Curator.

**TEXT-BOOKS AND BOOKS OF REFERENCE**

- ANATOMY.**—Morris, Gray (13th Ed.). Reference: Deaver.
- PHYSIOLOGY.**—Foster, American Text-book of Physiology.
- HISTOLOGY.**—Stoehr, Schaeffer, Stirling, Piersol. Reference: Koelliker, Toldt.
- CHEMISTRY.**—Witthaus' Laboratory Manual, Richter's Organic Chemistry.  
Reference: Remsen's Advanced Inorganic Chemistry, Pellet's Medical and Physical Chemistry.
- PHYSIOLOGICAL CHEMISTRY.**—Hammarsten, Rockwood.
- MEDICAL CHEMISTRY.**—Bartley.
- PHARMACEUTICAL AND MEDICAL CHEMISTRY.**—Sadler and Trimble.
- PHYSICS.**—Daniell's Medical Physics.
- MATERIA MEDICA.**—Butler's *Materia Medica*, White's *Materia Medica*, U. S. Dispensary.
- PATHOLOGY.**—Ziegler (Trans. from 8th German Ed.), Delafield-Prudden, Gibbs.  
Reference: Birch-Hirschfeld, Klebs.
- THERAPEUTICS.**—Butler, Hare, Shoemaker's *Materia Medica and Therapeutics*.  
Reference: Bartholow, Brunton, Wood, Ringer, Edes.
- HYGIENE AND MEDICAL JURISPRUDENCE.**—The Students' Hand-book of Forensic Medicine and Medical Police, Husband; Practical Hygiene, Parkes; Manual of Medical Jurisprudence, Taylor.
- PRACTICE OF MEDICINE.**—Osler, Strumpell, Anders. Reference: Allbutt's System of Medicine, Twentieth Century Practice; Nothnagel, *Specielle Pathologie und Therapie*; Dieulafoy, *Manuel de Pathologie Interne*.
- CLINICAL MEDICINE.**—Da Costa, Flint, Purdy's Practical Urinalysis, Hare's Diagnosis.
- SURGERY.**—Warren's Surgical Pathology and Therapeutics; Park's Surgery by American Authors; Erichsen's Science and Art of Surgery; Stimson's Fractures and Dislocations; Treves' Manual of Operative Surgery.
- OBSTETRICS.**—American System of Obstetrics; Practical Obstetrics by Grandin and Jarman; Playfair; Lusk.
- GYNECOLOGY.**—Clinical Gynecology by Keating and Coe; American Text-book of Gynecology.
- NERVOUS DISEASES.**—Gray. Reference: Gowers, Hamilton, Dana, Strumpell.
- MENTAL DISEASES.**—Gray. Reference: Spitzka, Clouston, Maudsley, Bucknall and Tuke.
- OPHTHALMOLOGY.**—Swanzy. Reference: Noyes.
- OTOLOGY.**—Roosa. Reference: Gruber.
- RHINOSCOPY AND LARYNGOLOGY.**—Bosworth. Reference: Burnett's System.
- DISEASES OF THE SKIN.**—Norman Walker, Jackson. Reference: Diseases of the Skin, J. Nevins Hyde, Radcliffe-Crocker.
- PEDIATRICS.**—L. Emmett Holt, Nathan Oppenheim, Taylor and Wells, Lewis Smith.
- TOXICOLOGY.**—Blyth on Poisons; Medical Jurisprudence and Toxicology, Reese.
- URINALYSIS.**—Purdy.
- PRESCRIPTION WRITING.**—Thornton's Manual.
- DICTIONARY, MEDICAL.**—Dunglison.

# GRADUATES, 1900

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Harry Everett Alderson.....	San Francisco, California
David Eugene Bacigalupi.....	San Francisco, California
Carlotta Ruth Deckelman.....	Pacific Grove, California
Dora Ida Dorn.....	San Francisco, California
Ernestine Doychert.....	San Francisco, California
Edgar James Farrow.....	San Francisco, California
William Harvey.....	San Francisco, California
Rutherford Buchard Irones.....	San Francisco, California
Elizabeth Frances Joyce.....	England
Bernard John Klotz.....	Vallejo, California
Samuel Walter Ross Langdon, Jr., A. B.....	Stockton, California
Julia Paulina Larson.....	Council Bluffs, Iowa
Thomas Michael Maguire, A. B.....	San Francisco, California
George Jewett McChesney, A. B.....	Oakland, California
Arthur Merrill McIntosh.....	Lovelock, Nevada
Tadataro Miyabe.....	Japan
William George Moore.....	Healdsburg, California
Mary Elizabeth Nolan.....	Oakland, California
Peter Opsvig, A. B.....	San Francisco, California
Mathew Denis Pratt.....	Napa, California
George Frederick Reinhardt, B. S.....	Berkeley, California
Raymond John Russ, B. S.....	Oakland, California
Louis Victor Saph, B. L.....	San Francisco, California
Frank William Simpson.....	Berkeley, California
John Francis Sullivan, B. S.....	San Francisco, California
George Joseph Sweeney.....	San Francisco, California
Theodora Elliott Vassault.....	San Francisco, California
Herbert Charles Watts.....	San Francisco, California
Emmet Le Roy Wemple, Jr.....	San Francisco, California
Edwin Milton Wilder, B. L.....	Oakland, California

# MATRICULANTS, 1899-1900

---

Augusta Abenheim.....	Japan
Harry Everett Alderson.....	San Francisco, California
David Eugene Bacigalupi.....	San Francisco, California
Benjamin Bakewell, B. S.....	Oakland, California
Josephine Eugenia Barbat, Ph. G.....	San Francisco, California
William Baumgarten, Ph. G.....	Tehama, California
Wilfred Fenton Beerman, Ph. G.....	San Francisco, California
Fremont Homer Berka.....	Lorin, California
Philip August Bill.....	San Francisco, California

René Bine.....	San Francisco, California
Joseph George Brady, A. B.....	San Francisco, California
Kate Isabel Brady, B. A.....	San Francisco, California
*Louis Isidor Breitstein.....	San Francisco, California
*James Charles Bride.....	San Francisco, California
David William Brown.....	Clements, California
Emma Buckley .....	San Jose, California
William Charles Chilson.....	Fallbrook, California
Harry Elwin Clay.....	Pomona, California
James Warren Conlin.....	San Francisco, California
Bruce Lamont Crise.....	Escondido, California
George De Witt Culver.....	Chico, California
Carlotta Ruth Deckelman.....	Pacific Grove, California
Walter Murray Dickie, Ph.B.....	Riverside, California
John Gapen Donaldson, Ph.G.....	Oakland, California
Dora Ida Dorn.....	San Francisco, California
Ernestine Doychert.....	San Francisco, California
Ralph Orlando Dresser.....	Paso Robles, California
*Palmer Howard Dunbar, D.D.S.....	San Francisco, California
James Alexander Ellis.....	Alameda, California
Mary Charlotte Faas.....	San Francisco, California
Henry David Fanning, A. B.....	San Francisco, California
Edgar James Farrow.....	San Francisco, California
Manuel Fernandez .....	Pinole, California
John Nevison Force, B. Sc.....	San Francisco, California
Ernest Charles Foster.....	Oakland, California
*Otto George Freyermuth.....	Pomona, California
*Frederick Augustus Giesea.....	Stockton, California
Frank Robert Girard, Jr.....	Oakland, California
Charles Raymond Gleason.....	San Leandro, California
Robert Hilliard Goodale.....	San Pablo, California
Etta Hagan.....	San Francisco, California
James Kiah Hamilton, Jr.....	Alameda, California
William Harvey .....	San Francisco, California
Wilfred Bertram Hays.....	Petaluma, California
Edward A. Hazen, Ph.G.....	San Jose, California
Frank Revere Henderson.....	Merced, California
Harold Phillips Hill, A. B.....	Redlands, California
Reuben Chandler Hill.....	Berkeley, California
James Raymond Hurley.....	San Bernardino, California
Rutherford Buchard Irones.....	San Francisco, California
Madeline Johns.....	San Francisco, California
Elizabeth Frances Joyce.....	England

\*Not in regular attendance.

George Hippolyte Juilly, Sc.B .....	San Francisco, California
Daniel William Kamp.....	Petaluma, California
Francis Bailey Kane.....	San Francisco, California
Joseph James Kavanagh.....	San Francisco, California
Mary Frances Kavanagh.....	San Francisco, California
*Emmet Carlin Keane .....	San Francisco, California
*David Kleinmann.....	San Francisco, California
Bernard John Klotz.....	Vallejo, California
Ostrollo Stanislaus Kucich.....	San Francisco, California
Samuel Walter Ross Langdon, Jr., A. B.....	Stockton, California
Julia Paulina Larson.....	Council Bluffs, Iowa
Clyde Briggs Laughlin.....	Mark West, California
Adelebert Watts Lee.....	Carson City, Nevada
Birney Alexander Lendrum.....	San Jose, California
John Herbert Leimbach.....	Sacramento, California
Milton Byrne Lennon, A. M.....	San Francisco, California
John Vaughan Leonard .....	San Francisco, California
William Kinkade Lindsay.....	Consumne, California
Henry Hymen Lissner.....	Oakland, California
Rudolph Ignatius Longabach.....	San Francisco, California
Robert Hansen Madsen, A. B.....	San Francisco, California
*Walter Edmund Magee .....	Berkeley, California
Ergo Alexander Majors.....	Alameda, California
Thomas Michael Maguire, A. B.....	San Francisco, California
John Harry Mallory.....	San Francisco, California
George Jewett McChesney, A. B .....	Oakland, California
Clarke Loring McClish, B. S.....	College Park, California
Florence McCoy, B. S.....	Oakland, California
Arthur Thomas McGinty .....	San Francisco, California
William Garrett McGuire.....	Sacramento, California
Arthur Merrill McIntosh.....	Lovelock, Nevada
William Joseph McKinley.....	Forest Hill, California
Aloysius John McKinnon.....	San Francisco, California
Charles Lemon McKown.....	San Francisco, California
Thomas Reid McNab.....	Riverside, California
Joseph Francis Meagher, A. B.....	San Francisco, California
Caroline Stow Merwin.....	Oakland, California
Mark Leonard Minor .....	Berkeley, California
Welty Daniel Minor.....	Berkeley, California
Pernier Albert Mix.....	Berkeley, California
Tadataro Miyabe.....	Japan
William George Moore.....	Healdsburg, California
Frederic Lincoln Morong.....	San Francisco, California
Dan Hazen Moulton.....	Oakland, California

\*Not in regular attendance.

George Edwin Murphy.....	Sacramento, California
William James Murphy.....	Vallejo, California
John Crockett Newton, Ph.G.....	San Francisco, California
Mary Elizabeth Nolan.....	Oakland, California
James Ignatius O'Dea, A. B.....	San Francisco, California
Joseph Martin O'Donnell, A. B.....	Hollister, California
Peter Opsvig, A. B.....	San Francisco, California
Harry Elwin Piper.....	Santa Cruz, California
*Jesse Ransom Powell.....	Healdsburg, California
George Herman Powers, Jr., A. B.....	San Francisco, California
Mathew Denis Pratt.....	Napa, California
James Fowler Pressley.....	Santa Rosa, California
George Philip Purlenky, Ph.G.....	San Francisco, California
Oscar Charles Reeve.....	Berkeley, California
George Frederick Reinhardt, B. S.....	Berkeley, California
Robert Galiher Reynolds, Jr., A. B.....	Upper Lake, California
Harry Philip Roberts.....	San Francisco, California
Romeo Richmond Root.....	Tempe, Arizona
Carrie Rosenberg.....	San Francisco, California
Walter Scott Kennedy Rutherford.....	Oakland, California
Raymond John Russ, B. S.....	Oakland, California
Louis Victor Saph, B. L.....	San Francisco, California
*Spiro Sargentich, Ph.B.....	Montenegro, Europe
Lionel Samuel Schmitt.....	San Francisco, California
James Walter Seawell.....	Healdsburg, California
Haydn Mozart Simmons, Ph.G.....	San Francisco, California
Frank William Simpson.....	Berkeley, California
Hudson Smythe.....	Stockton, California
John Miller Stephens, A. B.....	Paris, Kentucky
Earle Almeron Stone, B. L.....	Oakland, California
*Peter John Soracco, B. S.....	Sutter Creek, California
John Francis Sullivan, B. S.....	San Francisco, California
*Earle Cook Swan, B. S.....	Berkeley, California
George Joseph Sweeney.....	San Francisco, California
George William Sweetser, Ph.G.....	San Francisco, California
Leon Walter Teaby.....	Geyserville, California
Fred Henry Tebbe.....	Yreka, California
Benjamin Thomas, M. A.....	Palo Alto, California
Lewis Leigh Thompson.....	Gridley, California
Joseph Michael Toner.....	San Francisco, California
Edward Topham.....	Milpitas, California
Herbert Fred True.....	Los Angeles, California
Theodora Elliott Vassault.....	San Francisco, California
Blanche Coralie Van Heusen.....	Sacramento, California

\*Not in regular attendance.

William John Walsh, B. S.....	San Francisco, California
Herbert Charles Watts.....	San Francisco, California
Hannah Ellen Webster.....	San Jose, California
Emmet Le Roy Wemple, Jr.....	San Francisco, California
Sydney Vattel West, B. S.....	Colusa, California
John Lysander White.....	Sacramento, California
Edwin Milton Wilder, B. L.....	Oakland, California
Walter Joseph Marie Williams, A. B.....	San Francisco, California
Clarence Alfred Wills.....	Antioch, California
*Chester Howard Woolsey, B. S.....	Berkeley, California
Una Yone Yanagisawa, B. L.....	Japan
*John Alexander Young, B. S.....	San Francisco, California
Fredrick H. Zumwalt, Ph.G.....	San Francisco, California

## SPECIAL STUDENT.

Donald Harvey Ross.....	Belmont, California
-------------------------	---------------------

\* Not in regular attendance.

## COMPLETE LIST OF GRADUATES

Abraham, Henry, D. D. S.....	1898	Beede, Wm. M. S.....	1884
Addington, D. M.....	1879	Bell, William Lisle.....	1898
Adelung, Edw. von, Jr., B.S.....	1892	*Benedict, C. W.....	1875
Aird, John W.....	1893	Berndt, Richard M. H.....	1893
Alderson, Harry Everett.....	1900	*Bettleheim, A. F.....	1880
Alexander, Monrove K.....	1883	Biggs, F. P.....	1874
Allen, Clifford E.....	1896	*Blake, Chas. M.....	1876
Allen, Edward O.....	1875	Blake, Charles R.....	1891
Anderson, Helen O.....	1895	*Blake, James W.....	1874
Anderson, J. A.....	1873	Blum, Sanford.....	1896
Anderson, Winslow.....	1834	Bond, Fred. T., Ph. G.....	1890
Armistead, Cecil M.....	1896	Booth, John Richaad.....	1894
Armistead, Howell V.....	1885	Borchers, Bertha, B. L.....	1897
Arthur, Samuel Richard.....	1899	*Bordé Henry J.....	1833
Ash, Rachel Leona, B. S.....	1899	Botsford, Mary E.....	1896
Bacigalupi, David Eugene.....	1900	Boyes, Wm. J. R.....	1895
Bacigalupi, Louis D.....	1895	Bradbury, George F.....	1878
Badilla, Jose Crisanto.....	1895	*Brannan, J. J.....	1876
Baker, Henry A.....	1891	*Brierly, Conant B.....	1866
Baldwin, Robert O.....	1885	Briggs, M. W.....	1870
Barbat, John H., Ph.G.....	1883	Bromly, R. L.....	1882
Barbat, William B. F.....	1895	Broughton, Geo. A.....	1896
Barber, Edward T.....	1866	Brown, Ernest L.....	1886
Bartlett, Cosam Julian.....	1898	Brown, Geo. J.....	1876
Bates, Charles B.....	1868	Browne, Augustus F.....	1895
Bates, Walter E.....	1831	Bruguere, Pedar Sather.....	1893
Beardsley, E. M.....	1881	Bruns, W. C.....	1878
Beaunrister, B. H.....	1832	Buckley, Vincent P.....	1884
Beck, Henry M.....	1896	Bunker, Robert E.....	1889

\*Deceased.



Bunnell, Edwin, A. B.....	1894	Delmont, Francis.....	1874
Burchard, L. S.....	1882	*Dennia, Nathan P.....	1888
Burnham, Clark J.....	1891	DePuy, Anson A.....	1881
Burnham, William P.....	1896	DePuy, Edward Spence.....	1894
Bussenius, L. M. (D'Ancona)...	1892	Dickerson, Clarence Fitzhugh.....	1894
Cadwallader, Rawlins, A. M.....	1893	Dinkelspiel, Edgar M., Ph.B.....	1899
Caglieri, Guido E., B. S.....	1892	Dodge, H. Washington.....	1884
Cairns, John C.....	1867	Dorn, Dora Ida.....	1900
Calbreath, John F.....	1875	*Downs, George W.....	1879
*Caldwell, H. H.....	1880	Doychert, Ernestine.....	1900
Caldwell, Robert.....	1869	Drinkhouse, E. J. C.....	1865
Callaghan, D. T.....	1875	Driscoll, Edward P., Ph.G.....	1891
Callaway, Edwin.....	1898	*Dubois, A. L.....	1864
Cameron, Howard McD.....	1896	Dudley, Frank W.....	1895
Cameron, James S.....	1868	Dufficy, Geo. W.....	1898
Chace, Wm. D'A.....	1896	Dunbar, Arthur W.....	1891
*Chaigneau, V. A.....	1876	*Duncan, S. C.....	1877
Churchill, Leonard.....	1871	Dunn, James P. H., B. S.....	1888
Chalmers, Wm. P.....	1886	Dunn, William C., B. Sc.....	1897
Clark, George Waverley.....	1894	Easton, Daniel E. F.....	1895
Clark, J. J.....	1869	Ebright, George Elliott.....	1899
Clark, Thomas James.....	1899	*Emerson, Horatio B., Ph.G.....	1895
Clark, Wm. D.....	1884	Emerson, Mark Lewis.....	1899
Cleary, Stephen, Ph.G.....	1894	*Enright, Chas. M., A. B.....	1884
Clinton, C. A.....	1881	Eppinger, Roe (Sharp).....	1895
Cluness, Wm. R., Jr.....	1887	Estes, Melvin B.....	1888
Cochran, W. A.....	1869	Evans, C. W.....	1881
Coe, Leonard H.....	1896	Fahn, C. M.....	1865
*Collins, Addison C.....	1885	Falck, Millicent E.....	1893
Collischonn, Philip.....	1891	Farrow, Edgar James.....	1900
Colliver, John Adams, A. B.....	1899	Feder, Adelina M.....	1895
Conlan, Wm. E.....	1886	Feder, Grace.....	1896
*Connolly, John J.....	1876	Felt, Rae.....	1890
Connolly, Thos. E.....	1884	Fine, Andrew.....	1866
Conrad, David A.....	1893	Fine, Henry M.....	1898
Cook, Frank S.....	1887	Fitzgibbon, Frank Timothy.....	1894
*Corbett, S. J.....	1868	Fleming, Bartholomew F.....	1893
Cothran, A. Lincoln.....	1893	Fleisher, Frederick C. G.....	1893
Cox, Rosamond L.....	1888	Flood, John J.....	1895
Cox, Thomas F.....	1896	*Foote, Gilbert.....	1879
*Cox, Thos. H.....	1873	Ford, Campbell.....	1891
Crees, Robert.....	1894	Foreman, Francesca I.....	1889
Crook, Emma (McKay).....	1892	Fottrell, Michael J.....	1887
Crowley, Thomas J., Ph.G.....	1898	*Foulkes, J. F., Jr.....	1880
Curl, Holton C.....	1897	Franklin, Milton Washington.....	1899
Curran, Mary K. (Brandegge).....	1878	Fraser, S. J., A. B.....	1892
Damour, Ferdinand.....	1864	Freeman, Charles Henry.....	1894
D'Ancona, Arnold A., A. B.....	1884	Freeman, Ernest M., A. B.....	1893
Davidson, Joseph R.....	1875	Frick, Donald Jackson.....	1899
Davie, J. C., Jr.....	1864	Frick, Euclid B.....	1888
*Dawson, Alson.....	1875	Frost, James.....	1877
Day, John G.....	1884	Gale, Herbert A.....	1879
Dean, Andrew J.....	1881	Gall, Alexander M.....	1893
Deckelman, Carlotta Ruth.....	1900	Gallwey, John.....	1885

\*Deceased.

Gardner, Samuel James .....	1899	Irones, Rutherford Buchard....	1900
Gates, Frank H.....	1884	Johnstone, A.....	1879
Giannini, Attilio H., A. B.....	1896	Johnstone, Ernest K.....	1892
Gillham, G. W.....	1881	Jones, Ottiwell W.....	1889
Gillihan, Allen Francia.....	1890	Joseph, Simon E.....	1877
Giroux, Edward D.....	1898	Joyce, Elizabeth Frances.....	1900
Glaze, George I.....	1887	Judell, Malvina I.....	1898
Gleaves, Christopher C.....	1889	Katsuki, Ichitaro.....	1896
Glover, Cosmos A.....	1893	Kawakami, Masayasu.....	1889
Graham, Harrington B., B. S.....	1899	Keane, George B.....	1872
Grattan, E. L.....	1881	Keenan, Alex S.....	1898
*Gray, Robt. F., D. D. S.....	1895	Kellogg, Wilfred H., Ph. G.....	1896
Greth, August.....	1894	Kearney, Jas. F.....	1896
Gros, Edward.....	1865	Kelly, John L.....	1888
*Guilemard, A. J.....	1878	Kingsley, Thomas H.....	1886
*Hackett, John.....	1867	*Kirby, William T.....	1891
Halle, C. S.....	1869	Kirchhoffer, Frederick.....	1887
*Hampton, James E.....	1871	*Kirkpatrick, C. A.....	1871
*Handy, J. C.....	1864	Kirkwood, J. W.....	1876
Hansen, Thomas C.....	1867	Klotz, Bernard John.....	1900
Happersberger, Albert K., A.B.....	1888	Kobayashi, Sankio.....	1887
Harmon, R.....	1879	Kosbue, A. Emil.....	1875
Harrigan, Jos. T.....	1896	Kugeler, Henry B. A.....	1890
Harris, Thomas W.....	1875	Kurtz, Joseph.....	1872
Harvey, William.....	1900	Lagan, Edward.....	1891
Haskins, Wm. H.....	1889	Lagan, Hugh.....	1893
Hawkins, Wm. J.....	1890	Langdon, S. W. R., Jr., A. B.....	1900
Hay, Wm. G.....	1895	Lanz, Paul Ruhnke.....	1899
Heavitt, Granville.....	1866	Larson, Julia Paulina.....	1900
Henesey, Walter Joseph.....	1899	Lartigan, August L. J.....	1896
Heinemann, J. M.....	1877	Laidlaw, Horace.....	1880
Heller, Clarence L.....	1895	Lee, Arthur S.....	1896
Helma, Geo. L.....	1895	LeFevre, J. P.....	1881
Hickey, Thomas A.....	1897	Legge, Robert Thomas, Ph. G.....	1899
*Hicks, Young B.....	1874	Leland, Thomas B. W.....	1894
Hill, Edward John.....	1894	*Lewitt, F. A.....	1878
Hill, Howard S.....	1894	*Lindenberger, W. H.....	1876
*Hodgdon, W. H. A.....	1876	Linforth, Grace S.....	1898
Holmes, Edw. R.....	1889	Lingo, Marin B.....	1866
Holmes, Thomas Blakeney.....	1894	Lonigo, Emil V.....	1883
*Hook, Walter E.....	1876	Lord, Franklin F.....	1880
Hopkins, Edw. K.....	1895	Lovett, Wm. B.....	1883
Hopkins, T. P.....	1880	Lowe, Fred W.....	1892
Horton, E. Shelton.....	1893	Lucchetti, Victor F., Ph. G.....	1898
Howard, Katherine I.....	1885	*Lundborg, Gustaf W.....	1883
Howard, Wm. B.....	1887	Lustig, Daniel D., Ph. G.....	1885
Howell, H. H.....	1879	Lutz, Frederick A.....	1895
Hughes, Jerome A.....	1883	*Lyford, L. Dexter.....	1872
*Hughes, L. J.....	1879	MacCallum, Hammond J.....	1895
Hull, James P.....	1895	Macdonald, James M.....	1891
Hulse, Clarence H.....	1893	MacInnis, Martin B.....	1894
Hunkin, Sam. J.....	1890	Mackenzie, J. H.....	1899
Huntington, Samuel D., B. A.....	1897	Maguire, Charles S., B. S.....	1893
Hyde, George E.....	1895	Maguire, Thomas M., A. B.....	1900

\*Deceased

Maher, Thomas D., B. Sc.....	1896	Morrow, Howard.....	1896
Maloon, Clarence La F., B. Sc.....	1896	Morse, Fred. W.....	1891
Mann, Chas. S.....	1890	*Muenther, Henry.....	1882
Martineaut, E. D.....	1873	Mueller, H. E.....	1880
*Martinez, John M.....	1890	Müller, Friedrich C.....	1893
Marx, Frances R. (Greene).....	1889	Murphy, James D.....	1896
Mason, Benjamin F.....	1875	Muscott, Brayton.....	1896
Mather, Squire R.....	1889	Nast, J. E.....	1895
Matthewson, J. M.....	1882	Nelson, John A.....	1891
Mayer, Oscar I., Ph. G.....	1889	Newman, Alfred, A. B.....	1896
Mays, Arthur H.....	1887	*Newmark, Valentine.....	1868
Mays, William H.....	1873	Nichols, Theodore A.....	1885
McCarthy, Charles D.....	1893	Noble, John A.....	1883
McChesney, George J., A. B.....	1900	Noble, Mary L.....	1896
McColl, G. F.....	1877	Nolan, Mary Elizabeth.....	1900
McCone, Jas. F., B. S.....	1892	Nottage, George E.....	1874
McCormack, Herbert F., A. B.....	1876	Nuttall, George H. F.....	1884
*McCoy, Juan W.....	1884	O'Brien, Aloysius P.....	1889
McCulloch, Thomas A.....	1895	O'Brien, John Henry.....	1896
McCullough, Frank E.....	1894	O'Brien, John Thomas.....	1896
McDermott, Wm. P.....	1874	Ogden, Geo. W.....	1892
McDonald, J. J.....	1877	Oldenbourg, Louise A.....	1896
McElroy, Bernard F., A. B.....	1899	Olds, Wm. H.....	1881
McGettigan, Chas. D., A. B.....	1886	Oliver, Joseph A.....	1889
*McGuire, Lucius.....	1868	Olsen, Marie C. (Sommerfeldt).....	1891
McIntosh, Arthur Merrill.....	1900	O'Malley, Wm. H. I.....	1896
McKnight, Nellie M.....	1894	*O'Neill, A. A.....	1867
*McLaughlin, M. A.....	1878	*O'Neill, J. C.....	1873
McLaughlin, Alfred.....	1896	Onesti, Silvio Joseph, Ph. G.....	1899
*McLean, John T.....	1887	Opsvig, Peter, A. B.....	1900
McLean, Murdoch.....	1897	Orr, Robert H.....	1896
McLean, Robert A.....	1874	Osler, Chas.....	1878
McMahon, Frank A.....	1897	*Oviedo, Louis P., A. B.....	1891
McMurdo, John R., Ph. G.....	1891	Painter, Geo. L., Ph. G.....	1896
Menefee, Joseph S.....	1898	Park, Theorilda C.....	1887
Mervy, Emile C.....	1883	Parkman, Wallace E.....	1896
Merritt, G. W.....	1882	Partsch, Herman.....	1884
Meyer, Albert G.....	1890	Patton, Chas. J.....	1893
Meyers, R. C.....	1880	Patterson, T. J.....	1882
Millar, Charles Forester.....	1899	Pawlicki, Casimir F., B. Sc.....	1894
Miller, Chas. F.....	1874	Payne, J. R.....	1882
Miller, John A.....	1875	Perrault, Edward L.....	1885
Milton, Joseph L.....	1891	Pescia, Joseph.....	1877
Minor, John F.....	1876	Petrie, Frank B., Ph. G.....	1891
Miyabe, Tadataro.....	1900	Phelan, Henry du R.....	1893
Mohun, Chas. C., Ph. G.....	1890	Plant, Benj. A.....	1886
Moloney, James John, Ph. G.....	1891	*Plummer, Richard H.....	1856
Moody, Mary W.....	1882	Pond, Gardner P.....	1893
Moore, Wm. George.....	1900	Pond, Henry M.....	1880
Morgan, Chas. L., A. B., Ph. G.....	1896	Pond, W. B.....	1864
Morgan, F. E.....	1881	Pope, Horace E.....	1876
Morrill, Augustus L.....	1887	Pope, Saxon Temple.....	1899
Morrissey, Joseph Grant.....	1894	Powell, J. M.....	1876
Morrison, Mary E.....	1894	Pratt, Mathew Denis.....	1900

\*Deceased.

Presley, J. B.....	1882	Shelton, Thomas W.....	1867
*Prevost, J. Renny.....	1866	Sherman, Elenora S. (Yelland).....	1884
*Pruett, J. A.....	1878	Shuey, Sarah I.....	1878
Putnam, Victor E.....	1896	Sichel, Gust. W.....	1876
*Quinlin, Albert P.....	1876	Sime, Neli A.....	1894
Rantz, Stephen H.....	1893	Simon, Grace.....	1893
Rathbone, Wm. T.....	1892	Simon, Jules A.....	1875
Reardan, T. B.....	1882	Simpson, Frank William.....	1900
*Reardon, Wm. E.....	1887	*Sims, John Marion.....	1891
Redington, Vida, B. S.....	1899	Smith, George S.....	1879
Reed, Clarence E.....	1883	Smith, Harvey F.....	1894
*Reich, George A.....	1877	Smith, T. H.....	1876
Reinhardt, George Fred., B. S.....	1900	Smith, Weston O.....	1891
Reith, Fenelon M.....	1894	Smith, William P.....	1875
Reynolds, George E.....	1877	Soboslay, Julius.....	1886
Rice, Edward James.....	1899	Sparks, Agnes.....	1879
Richardson, J. A.....	1866	Spring, Charlotte B.....	1890
Riley, J. S.....	1883	*Stafford, John T.....	1896
Rinne, Frederick A.....	1895	*Stanton, James.....	1882
Robertson, John W.....	1880	Steely, John.....	1867
*Robinson, Luke.....	1867	Stern, Arthur A., Ph. G.....	1896
Roche, Thos. B., Ph. G.....	1898	Stevens, William Emerson.....	1899
Rocher, Joseph.....	1896	Stevenson, G. Lawrence, A. B.....	1899
Root, Corydon B., D. D. S.....	1894	Stevenson, B. B.....	1877
Roche, James.....	1876	*Stewart, J. M.....	1882
Rucker, H. N.....	1870	Stewart, Mary J.....	1896
*Rupe, Samuel H.....	1866	Stirewalt, Henry W.....	1894
Russ, Raymond John, B. S.....	1900	*Stivers, C. A.....	1864
Ryer, Marshall B.....	1896	Stone, Bertram.....	1895
Ryfkogel, Henry A. L.....	1894	Stone, Mack V.....	1896
Sabey, L. A.....	1880	Stover, Wm. M.....	1896
Sage, C. T.....	1878	Stow, Eleanor M.....	1896
Sanborn, Franklin H.....	1892	Sullivan, John Francis, B. S.....	1900
Sanborn, William K., Ph. G.....	1893	*Summers, G. M.....	1876
Sankey, Mary J.....	1895	Summers, John F.....	1878
Saph, Louis Victor, B. L.....	1900	Surryhne, Benj. F.....	1890
Sawyer, H. C.....	1881	Sutherland, Robert L.....	1892
Scheelhouse, E. J.....	1875	Sutro, Emma L. (Merritt).....	1881
Schmels, Charles J., Ph. G.....	1895	Swann, Charles M.....	1875
Schnabel, Martin.....	1873	Sweeney, George Joseph.....	1900
Scholl, Albert J.....	1890	Swisher, J. R.....	1877
Scholl, Albert L., Ph. G.....	1884	Tartar, A. P.....	1882
Schrader, Sydney H.....	1893	Taylor, Edward R.....	1865
Scott, Arthur W.....	1879	Taylor, James Edward, B. S.....	1899
Scott, Florence.....	1896	Taylor, Oscar Pettleton, A. B.....	1899
Seavey, L. T.....	1878	Terry, Wallace I., B. S.....	1892
Seawell, John L.....	1870	Tevis, Henry L.....	1887
Seawell, Thomas W.....	1876	Thompson, James Goodwin.....	1894
Selling, Nathalie.....	1894	Thorp, Lewis S.....	1896
*Sellon, Anna F.....	1881	Thrasher, Marion.....	1890
*Senter, Elizabeth S.....	1882	Tiffany, Edward F.....	1894
Shannon, James.....	1887	Tillman, Frank J.....	1898
Sharp, James Graham, D.D.S.....	1894	Tobiner, Oscar, D. D. S.....	1898
Sheets, John H.....	1881	*Toland, Charles A.....	1869

\*Deceased.

*Trafton, William A.....	1895	Wemple, Emmet Le Roy, Jr....	1900
Trask, Henry C., Ph. G.....	1896	Weyer, Gustavus A., D.D.S....	1899
Trevino, Alberto.....	1896	Wheaton, S. P.....	1877
Trew, Niel C.....	1898	White, James T.....	1888
Tuggle, Samuel P.....	1889	*Whittell, A. P.....	1873
*Turner, J. T.....	1869	Wickman, Wm. J.....	1883
Tuttle, H. P.....	1869	Wightman, Emma.....	1899
Urban, Kurt.....	1883	*Widney, J. P.....	1867
Vassault, Theodora Elliott.....	1900	Wilcox, Wilber J.....	1885
Villain, Albert J., Ph. G.....	1895	Wilder, Edwin Milton, B. L....	1900
Voigt, W. C.....	1879	Wilkes, Farrington.....	1894
Von Buelow, F.....	1877	Willard, William Patten.....	1899
Wade, Mark S.....	1889	Williams, Robert B.....	1887
Waller, Newton B.....	1896	Williamson, John M.....	1885
Walz, G.....	1868	Williamson, W. T.....	1877
Wanzer, L. M. F.....	1876	Wilson, Kemlo R. McD.....	1886
Warner, James Kyle.....	1891	Winton, Henry N.....	1885
Watanabe, Tey.....	1887	Woods, W. E. Josephine.....	1885
*Waters, John W.....	1874	*Wooster, David.....	1885
Watts, Herbert Charles.....	1900	Wright, Henry E.....	1894
Wayson, James T.....	1891	Young, Junius D.....	1881
Webber, J. C.....	1869	Younger, Alex. J.....	1869
*Weeks, F. L.....	1864	Younger, Edward A.....	1879
Weiss, R. M.....	1877	*Zeyn, Gustav C.....	1889
Welch, W. P.....	1864		
Total.....		539	

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\*Deceased

## THE ALUMNI ASSOCIATION

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The Alumni Association of the Medical Department of the University of California now includes in its membership most of the graduates of the institution, and the officers for the ensuing year take pleasure in announcing a prosperous outlook for the Association.

The objects of the Society are the promotion of the prosperity of our *Alma Mater*, the maintenance and cultivation of fraternal feeling among the alumni, and the advancement of the interests of medical education and the diffusion of scientific knowledge.

Professors and Teachers in the Medical Department are entitled to honorary membership with an appropriate certificate.

The meetings during 1900-1901 will be held quarterly. At these meetings medical and scientific topics will be brought up for discussion, and all present asked to participate.

Papers and reports of special cases are solicited from members outside of the city or abroad.

All alumni are cordially invited to identify themselves with the Association and assist in the promotion of its welfare.

GARDNER PERRY POND, M. D., President.

For further particulars address the Secretary of the Association,

ROSAMOND L. COX, M. D.,

705 Sutter St., San Francisco.

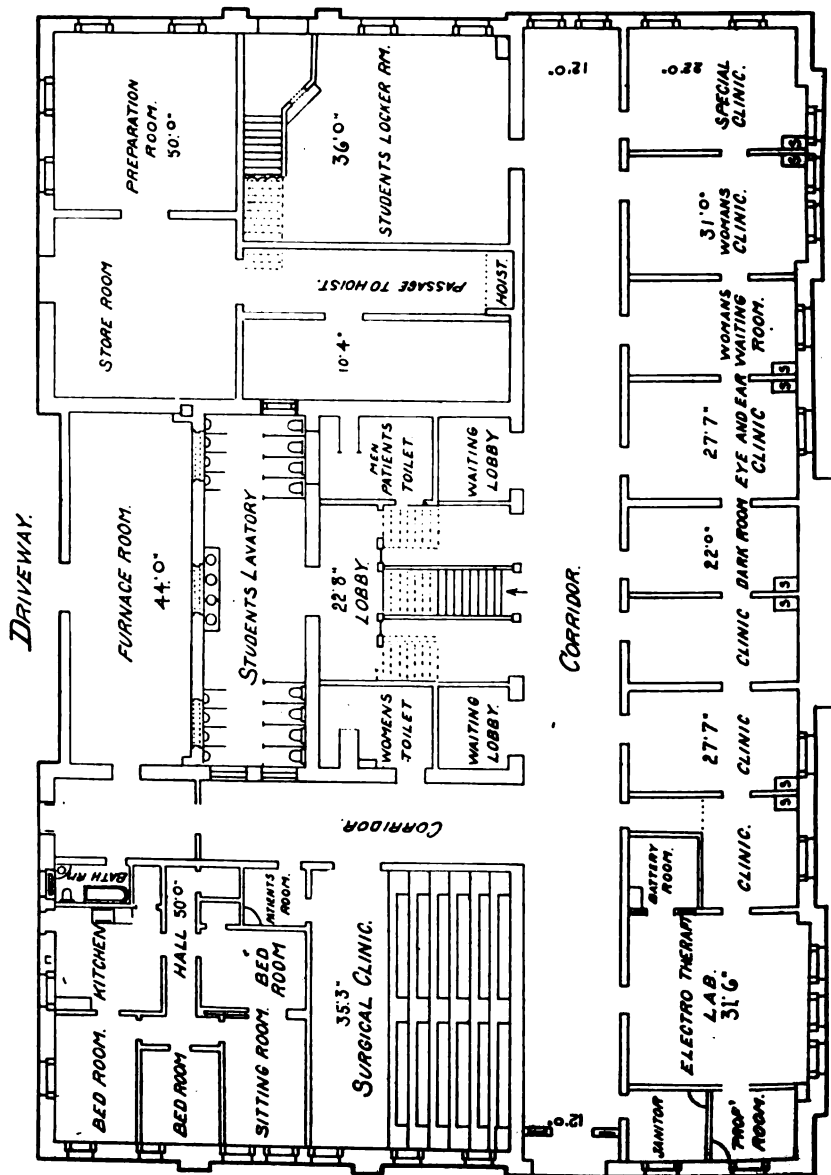


PLATE NO. I.  
PLAN OF BASEMENT.

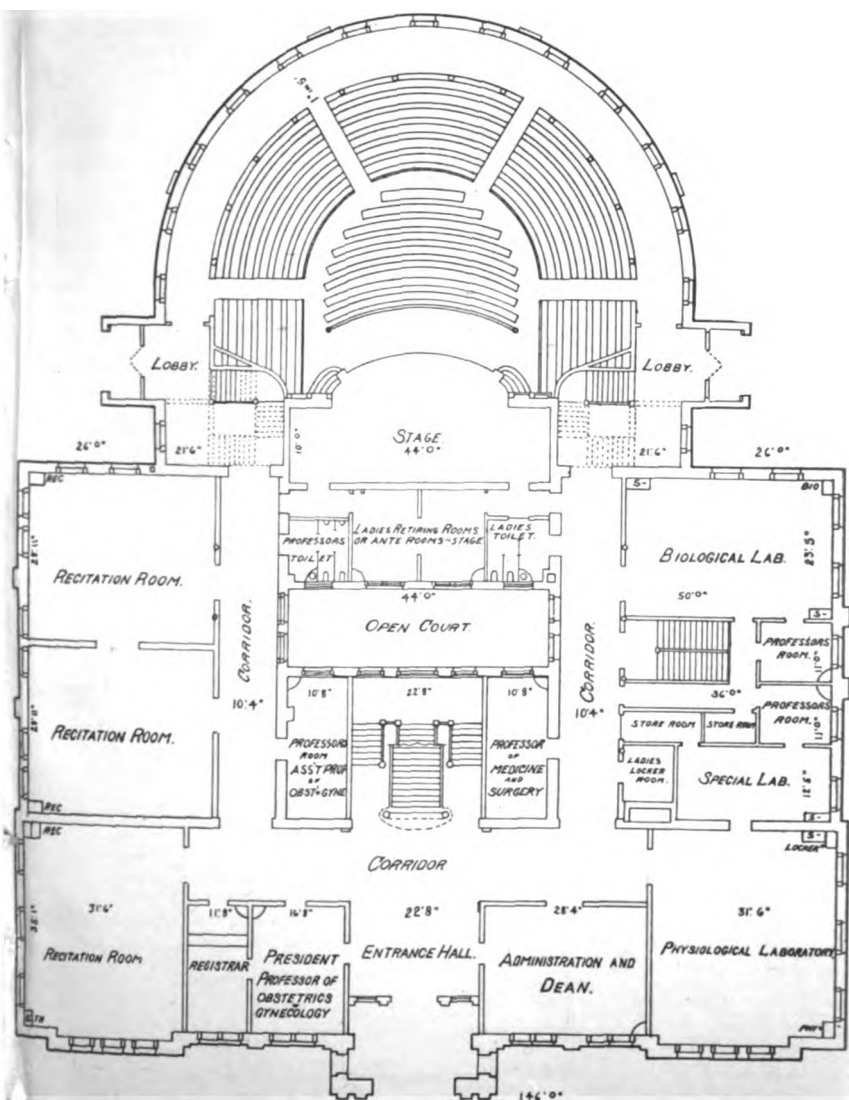


PLATE NO. II.  
PLAN OF FIRST FLOOR.



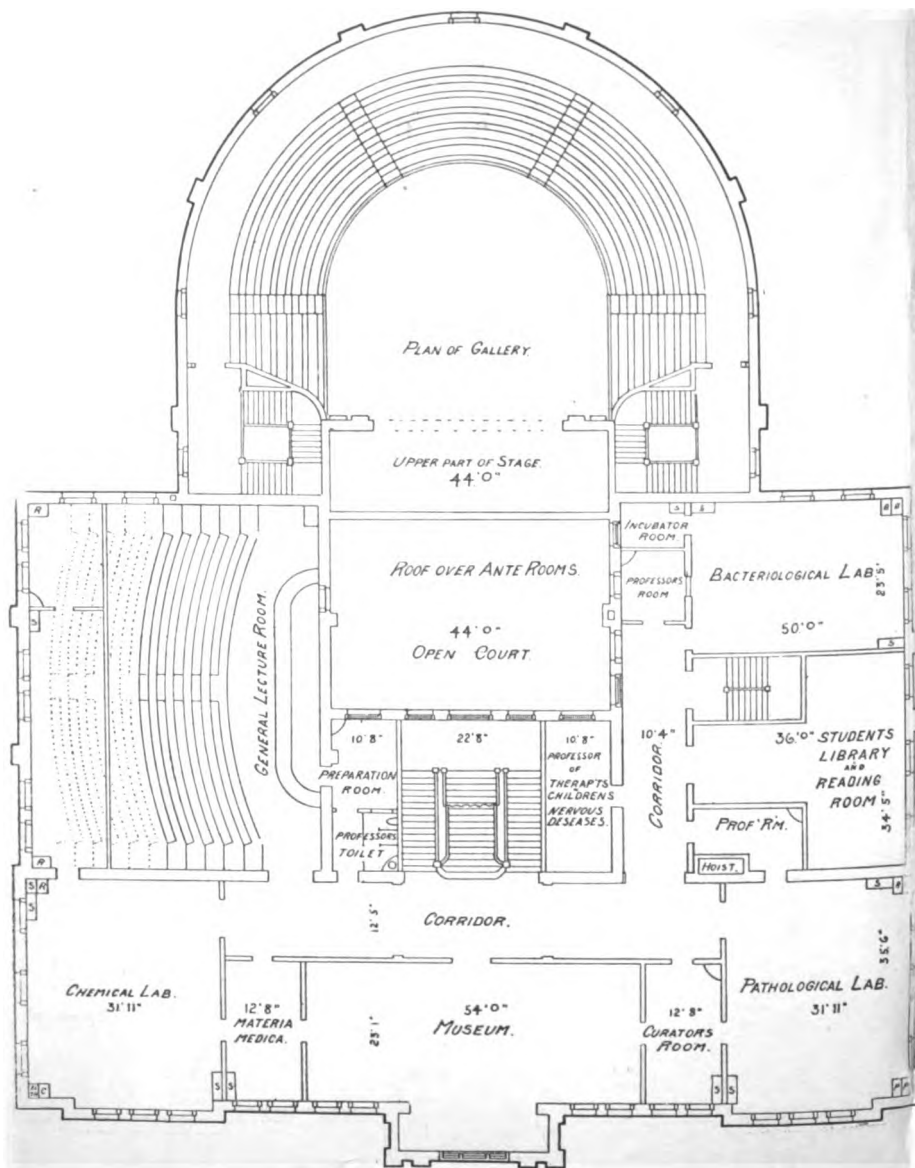
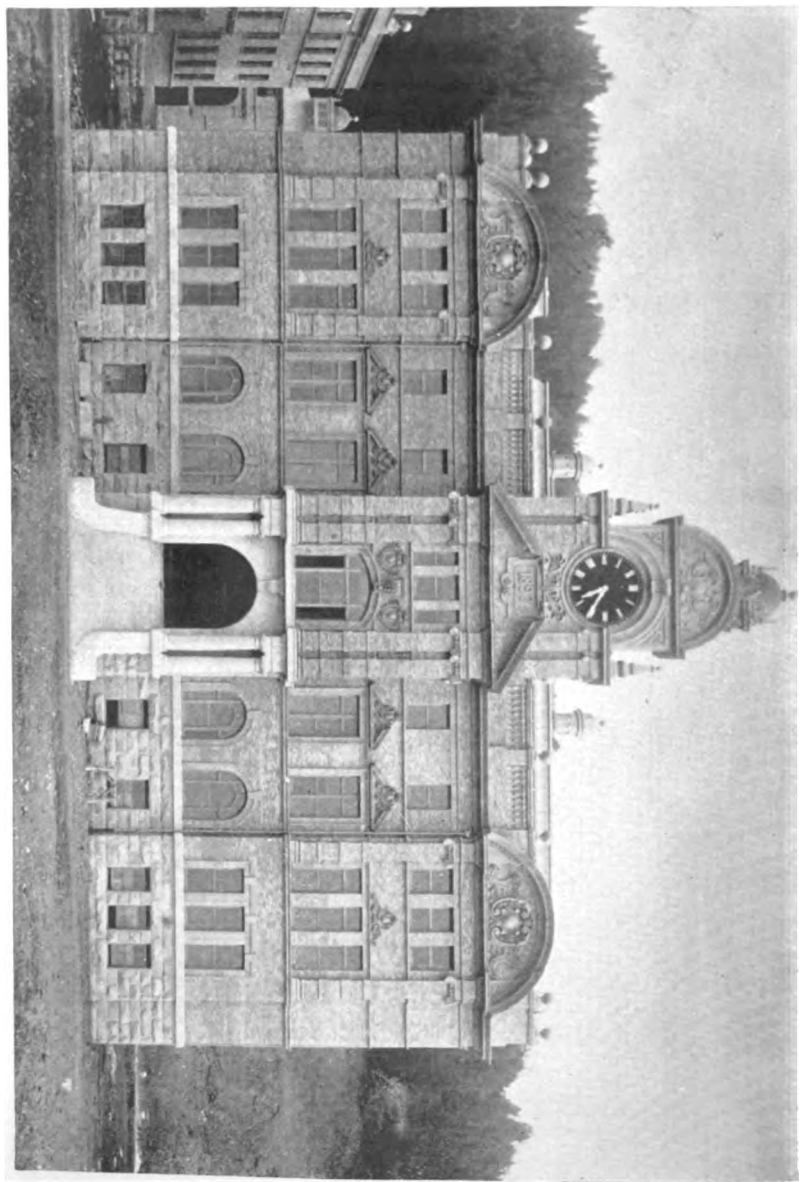


PLATE No. III.  
PLAN OF SECOND FLOOR.





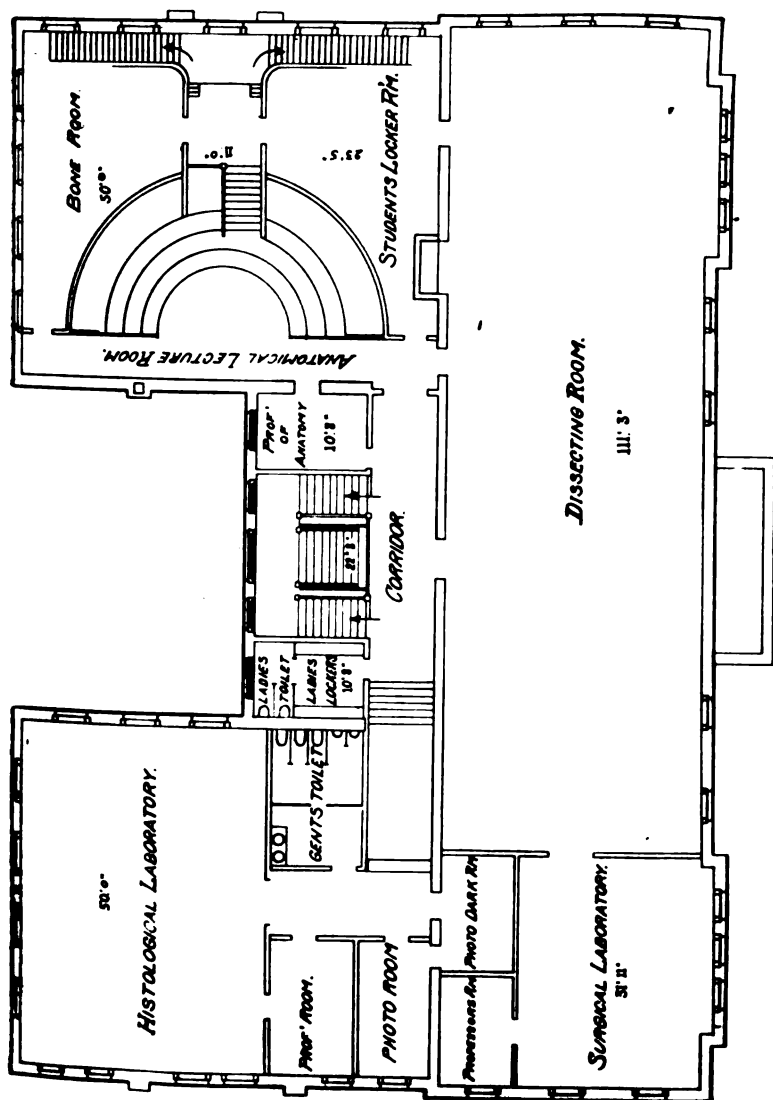


PLATE N<sup>o</sup>. IV.  
PLAN OF THIRD FLOOR.



**MEDICAL DEPARTMENT**

**University of California**

**THIRTY-NINTH ANNUAL ANNOUNCEMENT**

**WITH**

**CATALOGUE OF STUDENTS AND GRADUATES**

**AND REPORTS OF HOSPITAL AND DISPENSARY CLINICS**

**1901-2**

## CALENDAR FOR 1901-2

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THE TERM will open on Monday, September 2, 1901, and close on Wednesday, April 30, 1902.

Beginning with the college year of 1902-3, the sessions will begin August 15 and end May 15.

THE MATRICULATION EXAMINATIONS will be held at Berkeley, August 12, 13, and 14, 1901.

THE EXAMINATIONS for promotion and the final examinations for graduation will begin Friday, May 2.

THE SUMMER COURSES in Histology, Physiology, Pathology and Bacteriology will begin June 30, 1902.

THE LABORATORY and LECTURE COURSES are given at the College Building, south of the east end of Golden Gate Park.

THE CLINICAL LECTURES are delivered at the City and County Hospital, Twenty-second street and Potrero avenue.

THE DISPENSARY CLINICS are held at 155 New Montgomery street.

THE ANNUAL COMMENCEMENT for conferring the Degree of Doctor of Medicine is held in May.

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All communications should be addressed to

DR. A. A. D'ANCONA, Dean of the Faculty,  
1022 Sutter St., San Francisco, California.

# UNIVERSITY OF CALIFORNIA

## BOARD OF REGENTS

### Ex-Officio Regents

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<i>Lieutenant-Governor.</i>	
HON. C. W. PENDLETON.....	LOS ANGELES
<i>Speaker of the Assembly.</i>	
HON. THOS. J. KIRK.....	SACRAMENTO
<i>State Superintendent of Public Instruction.</i>	
HON. ADOLPH SPRECKELS.....	SAN FRANCISCO
<i>President of the State Agricultural Society.</i>	
S. C. IRVING, ESQ.....	SAN FRANCISCO
<i>President of the Mechanics' Institute.</i>	
BENJAMIN IDE WHEELER, Ph. D.....	BERKELEY
<i>President of the University.</i>	

### Appointed Regents

The names are arranged in order of original accession to the Board.

NAME	ADDRESS	*TERM EXPIRES
HON. WILLIAM T. WALLACK,	799 Van Ness Ave., San Francisco,	1902
ISAIAS WM. HELLMANN, ESQ.,	Nevada Bank, San Francisco,	- 1902
ARTHUR RODGERS, B. S., LL. B.,	309 Montgomery St., S. F.,	- - 1906
JAMES F. HOUGHTON, E.,	223 Mission St., San Francisco,	- 1904
CHESTER ROWELL, M. D.,	Fresno, - - - - -	1910
JAMES A. WAYMIRE, ESQ.,	Alameda, - - - - -	1908
HON. C. W. SLACK, Ph. B., LL. B.,	309 Montgomery St., S. F.,	- - 1910
JACOB BERT REINSTEIN, A. M.,	217 Sansome St., San Francisco,	1912
JOHN E. BUDD, A. B.,	Stockton, - - - - -	1916
MRS. PHEBE A. HEARST,	Mills Building, San Francisco,	- 1914
GEORGE C. PARDEE, Ph. B., M. D.,	Chronicle Building, San Francisco,	1914
HON. W. H. L. BARNES,	Crocker Building, San Francisco,	1912
A. W. FOSTER, ESQ.,	Mutual Life Building, S. F.,	- - 1916
C. N. ELLINWOOD, M. D.,	639 Kearny St., S. F.,	- - - 1908
GARRET MCENERNEY, ESQ.,	Nevada Block, S. F.,	- - - 1914

\* Terms of Regents expire March 1.

Regular meetings of the Board of Regents are held five times a year, viz: In San Francisco on the second Tuesday in March, June, September and December; in Berkeley, on the day preceding Commencement.



## UNIVERSITY OF CALIFORNIA

## MEDICAL DEPARTMENT

## FACULTY

- BENJAMIN IDE WHEELER, LL.D., Ph. D., President of the University, *ex-officio*  
President of the Faculty.
- G. A. SHURTLEFF, M. D., Emeritus Professor of Mental Diseases and Medical  
Jurisprudence.
- ROBERT A. McLEAN, M. D., Professor of Clinical and Operative Surgery.
- BENJ. R. SWAN, M. D., Professor of Diseases of Children.
- GEORGE H. POWERS, A. M., M. D., Professor of Ophthalmology and Otolaryngology;  
Attending Oculist and Aurist, St. Luke's Hospital and St. Mary's Hospital.
- WM. WATT KERR, A. M., M. B., C. M., Professor of Clinical Medicine; Visiting  
Physician, City and County Hospital and Children's Hospital, and Consulting  
Physician, St. Luke's Hospital.
- ARNOLD A. D'ANCONA, A. B., M. D., Professor of Physiology; Dean.
- DOUGLASS W. MONTGOMERY, M. D., Professor of Diseases of the Skin; Consult-  
ing Dermatologist, German Hospital.
- WASHINGTON DODGE, M. D., Professor of Therapeutics; Attending Physician,  
St. Luke's Hospital.
- JOHN M. WILLIAMSON, M. D., Professor of Genito-Urinary Surgery.
- JOHN W. ROBERTSON, A. B., M. D., Professor of Nervous and Mental Diseases;  
Physician, Livermore Sanitarium and Hospital for Mental Diseases.
- HARRY M. SHERMAN, A. M., M. D., Professor of the Principles and Practice of  
Surgery; Visiting Orthopedic Surgeon, Children's Hospital and Attending  
Surgeon, St. Luke's Hospital.
- ALONZO E. TAYLOR, M. D., Professor of Pathology; Curator; Pathologist, St.  
Luke's Hospital.
- WM. E. HOPKINS, M. D., Clinical Professor of Ophthalmology and Otolaryngology;  
Visiting Oculist and Aurist, City and County Hospital, Children's Hospital  
and St. Luke's Hospital.
- CHAS. A. VON HOFFMANN, M. D., Professor of Gynecology; Visiting Obstetri-  
cian, Children's Hospital; Visiting Gynecologist, St. Luke's and City and  
County Hospitals.
- HERBERT C. MOFFITT, B. S., M. D., Professor of the Principles and Practice of  
Medicine.
- GEO. F. SHIELS, M. D., F. R. C. S. E., Etc., Associate Professor of the Princi-  
ples and Practice of Surgery; Visiting Gynecologist, St. Luke's Hospital  
and Visiting Surgeon, City and County Hospital.
- WM. B. LEWITT, M. D., Associate Professor of Diseases of Children; Visiting  
Physician, St. Luke's and Children's Hospitals.
- FRANK T. GREEN, Ph.G., Professor of Physiological Chemistry.
- THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery; Visiting  
Surgeon, City and County Hospital.

- BEVERLY MACMONAGLE, M. D., Lecturer on Gynecology; Visiting Surgeon and Gynecologist Children's Hospital and Consulting Gynecologist, German Hospital.
- LEO NEWMARK, M. D., Lecturer on Neural Pathology; Consulting Neurologist, German Hospital.
- JAMES F. McCONE, B. S., M. D., M. R. C. S. Eng., Lecturer on Obstetrics; Consulting Obstetrician, City and County Hospital.
- CHARLES L. MORGAN, A. B., Ph. G., M. D., Lecturer on Materia Medica.
- JOHN C. MERRIAM, Ph. D., Special Lecturer on Comparative Anatomy.
- LOUIS DE F. BARTLETT, A. B., LL. B., Special Lecturer on Medical Jurisprudence.
- J. HENRY BARBAT, Ph.G., M. D., Instructor in Surgery and Surgical Anatomy.
- WILLIAM J. HAWKINS, M. D., Instructor in Physiology.
- RICHARD M. H. BERNDT, M. D. Instructor in Therapeutics.
- THOS. B. W. LELAND, M. D., Instructor in Physical Diagnosis.
- HENRY A. L. RYFKOGEL, M. D., Instructor in Bacteriology.
- WALLACE I. TERRY, M. D., Assistant in Clinical Surgery.
- STEPHEN CLEARY, M. D., Demonstrator of Anatomy.
- CHAS. D. McGETTIGAN, A. B., M. D., Demonstrator of Anatomy.
- GEORGE E. EBRIGHT, M. D., Assistant in Clinical Medicine.
- FRED. C. BURROWS, A. M., M. D., Assistant in Clinical Medicine.
- GEO. F. REINHARDT, B. S., M. D., Assistant in Clinical Medicine.
- ALFRED NEWMAN, A. B., M. D., Assistant in Clinical Surgery.
- HAROLD P. HILL, A. B., M. D., Demonstrator of Physiology.
- HENRY B. A. KUGELER, M. D., Instructor in Operative Surgery.

# OUT-PATIENT DEPARTMENT

## Medicine—

Chief of Clinic:  
HERBERT C. MOFFITT, B. S., M. D.  
Assistant:  
OSCAR N. TAYLOR, A. B., M. D.

Chief of Clinic:  
J. MORA MOSS, M. D.  
Assistant:  
WM. E. STEVENS, M. D.

Chief of Clinic:  
CLARENCE QUINAN, M. D.

## Surgery—

PROF. JOHN M. WILLIAMSON, M. D.  
Chief of Clinic:  
HENRY B. A. KUGELER, M. D.  
JAMES P. DUNN, M. D.  
\*HAROLD BRUNN, M. D.  
CHAS. G. LEVISON, M. D.  
Assistant:  
MARSHALL B. RYER, M. D.

absent on leave.

*Genito-Urinary Clinic—*

PROF. JOHN M. WILLIAMSON, M. D.

Assistant:

CECIL M. ARMISTEAD, M. D.

—

JOHN C. SPENCER, M. D.

Assistant:

\*GEORGE H. RICHARDSON, M. D.

*Eye and Ear Clinic—*

PROF. GEO. H. POWERS, A. M., M. D.

Chief of Clinic:

GEORGE W. MERRITT, M. D.

Assistants:

HUGH LAGAN, M. D.

ROBERT H. ORR, M. D.

GRACE FEDER, M. D.

GRACE SIMON, M. D.

GRACE S. LINFORTH, M. D.

*Nose and Throat Clinic—*

PROF. GEO. H. POWERS, A. M., M. D.

Assistant:

GARDNER P. POND, M. D.

*Gynecology—*

PROF. CHAS. A. VON HOFFMANN, M. D.

Chief of Clinic:

JAMES F. McCONE, M. D., M. R. C. S. Eng.

Assistants:

MARSHALL B. RYER, M. D.

Z. T. MALABY, M. D.

*Cutaneous and Venereal Diseases—*

PROF. DOUGLASS W. MONTGOMERY, M. D.

Assistants:

ALFRED B. GROSSE, M. D.

ERNEST PRING, M. D.

HOWARD MORROW, M. D.

*Orthopedic Surgery—*

Chiefs of Clinic:

SAMUEL J. HUNKIN, M. D.

\*HENRY DU R. PHELAN, M. D.

Assistants:

JOHN J. FLOOD, M. D.

ELEANOR STOW BANCROFT, M. D.

\*Absent on leave.

## THIRTY-NINTH ANNUAL COURSE OF INSTRUCTION

### SESSION OF 1901-1902

The Medical Department of the University of California was organized in 1872, as an integral part of the State's educational center.

The curriculum may be summarized as follows:

**Four Annual Courses.**—For the session of 1901-2 attendance upon four courses, of eight months each, attended through four separate years, will be required before the student can present himself for graduation. Beginning with the College year of 1902-3, the sessions will begin August 15 and end May 15.

### COURSE OF STUDIES

#### FIRST YEAR

Comparative Anatomy.	Physiological Chemistry: with Laboratory Courses.
Descriptive Anatomy: Osteology and Syndesmosology; Dissections.	Toxicology and Urinalysis: with Laboratory Courses.
Histology: with Laboratory Courses.	Materia Medica: with Laboratory Courses.
Embryology: with Laboratory Courses.	
Physiology: with Laboratory Courses.	

#### SECOND YEAR

Descriptive Anatomy completed: Dissections.	Electro-Physics: with Laboratory Courses.
Special Anatomy of the Nervous System and Organs of Special Sense.	Morphological Pathology: with Laboratory Courses.
Physiology completed.	Chemical Pathology.
	Therapeutics.
	Physical Diagnosis.

#### THIRD YEAR

Surgical Anatomy.	Principles and Practice of Surgery.
Bacteriology: with Laboratory Courses.	Clinical Surgery, Hospital and Out-patient Department.
Medical Jurisprudence.	Gynecology.
Therapeutics.	Obstetrics.
Principles and Practice of Medicine.	
Clinical Medicine, Hospital and Out-patient Department.	

**FOURTH YEAR**

Principles and Practice of Medicine.	Autopsies
Clinical Medicine, Hospital and Out-patient Department.	Electives:—
Principles and Practice of Surgery.	Neurology.
Clinical Surgery, Hospital and Out-patient Department.	Pediatrics.
Gynecology.	Diseases of the Eye.
Clinical Obstetrics.	Diseases of the Ear, Nose and Throat.
Applied Chemistry, Pathology, and Bacteriology in Clinical Laboratory.	Orthopedics.
	Genito-Urinary Surgery.

At the close of the First or Freshman year the students must pass examinations in Histology and Embryology, Anatomy, Physiology, Physiological Chemistry, and Materia Medica. Students failing to pass the regular examinations in three or more branches lose thereby their class-standing and must repeat the Freshman year, their delinquent branches constituting their curriculum. Students failing to pass the regular examinations in one or two branches must present themselves for re-examination upon the subjects in which they have failed upon a designated date at the opening of the following academic year. Should the students upon the re-examination again fail in one branch they may carry that one branch as a condition into the Second or Sophomore year but must have passed it in order to be eligible to appear for the regular examinations scheduled for the Sophomore year. Students who upon re-examination again fail in two branches lose thereby their class-standing and must repeat their Freshman year, their delinquent branches constituting their curriculum.

At the close of the Second or Sophomore year students must pass examinations in Anatomy, Physiology, Morphological Pathology, Chemical Pathology, Therapeutics, and Physical Diagnosis. Students failing to pass three or more of these examinations lose thereby their class-standing and must repeat their Sophomore year, their delinquent branches constituting their curriculum. Students failing to pass the examinations in one or two of these branches must appear for re-examination as provided for in the previous section. Should the students again fail in two branches, they lose thereby their class-standing, and must repeat their Sophomore year, their delinquent branches constituting their curriculum. Students who upon re-examination again fail in one branch may carry that one branch as a condition into the Third or Junior year, but must have passed it in order to be

eligible to appear for the regular examinations scheduled for the Junior year.

At the close of the Third or Junior year the students must pass examinations in Therapeutics, Bacteriology, Obstetrics, the Practice of Medicine, and the Practice of Surgery. Students failing to pass three or more of these examinations lose thereby their class-standing and must repeat their Junior year, their delinquent branches constituting their curriculum. Students who fail to pass one or two of these branches must appear for re-examination as previously provided for. Should the students fail in two branches upon re-examination they lose thereby their class-standing, and must repeat their Junior year, their delinquent branches constituting their curriculum. Should the students fail in one branch upon the re-examination they may carry that one branch as a condition into the Fourth or Senior year but must have passed it in order to be eligible to appear for the regular examinations scheduled for the Senior year. Under no circumstances, however, are the students permitted to carry into the Senior year a condition in Bacteriology.

At the close of the Fourth or Senior year the students must pass examinations in the Practice of Medicine, in Clinical Medicine, in the Practice of Surgery, in Clinical Surgery, in Gynecology, in Obstetrics, and in three elective branches, one of which must be Neurology, Pediatrics or Diseases of the Skin. Students failing to pass three or more of these examinations lose thereby their class-standing and must repeat their Senior year, their delinquent branches constituting their curriculum. Students failing to pass the regular examinations in one or two of these nine branches of the Senior year may appear for re-examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they fail upon the re-examination to pass in one branch even, they lose thereby their class-standing and must repeat their Senior year, their delinquent branches constituting their curriculum.

For the determination of class-standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed With Honor", "Passed" and "Not Passed." The students passing "With Honor" in the greatest number of subjects are recommended for Internships.

In order to be eligible for examination in any study, students must have attended at least eighty per cent of the class exercises.

### THE COLLEGIATE YEAR

The session of 1901-2 will begin September 1st and continue eight calendar months.

With the opening of the session of 1902-3, the courses will begin August 15 and continue nine calendar months.

Students are not admitted to regular class-standing unless they matriculate not later than two weeks after the beginning of the session.

Regular clinics are held daily at the City and County Hospital, where the Professors of the clinical chairs have charge of wards and possess every advantage for the instruction of students; clinics are also held daily at the College Dispensary. Lectures and laboratory courses are given daily by the Professors.

The student in this city enjoys rare natural advantages for the healthful pursuit of his labors.

### SUMMER COURSES

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These courses are designed for advanced students and graduates in medicine.

1. **NORMAL HISTOLOGY.**—A special course in normal human histology is given for those who wish to take the laboratory courses in Pathology, Bacteriology and Clinical Microscopy, but who are inadequately prepared. This course is open also to graduates of recognized scientific colleges who have taken animal histology and are preparing to take the regular medical course and to become candidates for the degree of doctor of medicine.

2. **PHYSIOLOGY.**—A course in the Laboratory devoted mainly to muscle-nerve physiology and the physiology of respiration and circulation. The main purpose of the course is to explain the methods of physiological experimentation.

3. **PATHOLOGY.**—In this department three separate courses are offered, designed to meet the needs of practitioners and students.

(a) A general course upon Morphological Pathology, with special reference to disease studied from a clinical point of view. For this

course a good knowledge of Histology is essential. The instruction is entirely practical and elucidates the causal and reciprocal relations of disease.

(b) A course in special branches of Pathology for advanced students. A good knowledge of general Pathology and experience in pathological work are a pre-requisite.

(c) Chemical Pathology; for advanced students. This course contemplates the study of the chemistry of pathological processes. For this course an adequate knowledge of Chemical Physiology and technical experience are a pre-requisite.

4. BACTERIOLOGY.—Instruction in this course is from the standpoint of general Pathology and Clinical Medicine, the aim being to explain the general relation of the science, to illustrate the etiological relations of disease, and to equip the student and practitioner with the bacteriological procedures of diagnosis now established as necessary adjuncts to clinical medicine.

The fees for the courses in Histology and Physiology are \$25 each; for each of the other courses \$50.

Application for admission to these courses must be made not later than June 15. The courses begin June 30, 1902.



## LOCATION

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Through the wise munificence of the State Legislature, it has been rendered possible for the Medical Department of the University of California to occupy its magnificent new home south of Golden Gate Park, on a site donated to the University by the late Hon. Adolph Sutro.

The building has a frontage of 148 feet and a depth of 208 feet. This includes an auditorium with a seating capacity of 1,200.

The building contains quarters for equipment with the best modern apparatus upon the principle of individual student work.

There are various spacious laboratories, for histology, physiology, chemistry, pharmacy, pathology and bacteriology. There is a separate anatomical auditorium, besides special demonstration rooms for teaching the classes by sections.

By reference to Plate I, giving in outline the plan of the ground floor, it will be seen that there are eight smaller rooms devoted exclusively to clinical purposes besides a large auditorium devoted to clinical surgery.

On this floor are the Anatomical Preparation-room and Students' Locker-room, Janitors' Departments, Storage-room and Lavatories.

It is almost superfluous to state that from a sanitary standpoint the plumbing, heating and ventilation systems of the building are of the latest and most approved type.

The first floor (see Plate II) is entered by means of a stately portico which ushers one into a spacious Entrance Hall, immediately beyond which is a corridor giving access to the rooms along the front of the building and to the main auditorium. On this floor will be found the offices of administration, laboratories for Physiology and Chemical Pathology, the Hearst Laboratory for original research in pathology, an auxiliary Laboratory for research, a Recitation-room, and a Students' room.

The Auditorium has four distinct entrances and exits, a capacious stage and gallery; ample light both by day and by artificial means at night.

The second story (see Plate III) contains the laboratories for Morphological Pathology, Bacteriology and Physiological Chemistry,

the Museum, the Library and a large General Lecture room. At the rear are the entrances and exits to the gallery of the Auditorium.

The third floor (see Plate IV) contains, it is believed, the finest Dissecting-room in the world at the present time. It occupies the greater part of the front of the building, running back 33 feet 6 inches, and is 20 feet high. In this room are 38 tables. The light is brilliant both by means of ample skylight and windows for the day, and by artificial light at night.

The cadavers are preserved by a method which, while excluding decomposition, keeps the tissues soft even after the expiration of two or three years.

In addition, on this floor will be found the Anatomical Lecture-room, and a room devoted to Osteology, containing over fifty disarticulated human skeletons used for purposes of study. On this floor are Lockers for the use of those dissecting, Surgical and Histological Laboratories and a Photographic-room.

The topographical advantages found in the location of the buildings are great. Facing as they do the north, on an elevation to give an unobstructed view over a large part of the peninsula on which San Francisco is situated, with Golden Gate Park in the immediate foreground, an expansive view of the harbor, the Golden Gate and the Pacific Ocean, and the mountains and hills of Marin, Contra Costa and Alameda Counties, they receive the full benefit of the neighboring trade-winds blowing directly from the ocean, coupled with the advantage of perfect drainage.

A more commodious, better appointed building for the purposes intended it will be difficult to find, nor could the attractions and advantages offered to the student of medicine be greater.

**MATRICULATION EXAMINATION**

Students wishing to matriculate are required to undergo examinations for admission, with the following exceptions, viz:

1. Applicants who present certificates of having successfully passed the examination for admission to the College of Letters or the Colleges of Science of the University of California, or some other recognized University or College.
2. Applicants who present diplomas or certificates of graduation from the University of California, or of some other recognized University or College.
3. Applicants who present diplomas or certificates of graduation from recognized High Schools and Academies.
4. Applicants who present diplomas or certificates of graduation from a State Normal School of California, or of any other state or territory.

Applicants whose credentials are otherwise satisfactory will be required to pass an examination in Latin and Physics, if their certificates do not cover those subjects.

Matriculants not presenting satisfactory credentials are required to pass the examination in the subjects named below, conducted by the regular examining board of the Academic Department of the University. These examinations will be held at Berkeley, August 12, 13 and 14. It is expected that the authorities will also provide an entrance examination at some earlier time at points distant from Berkeley. Applicants who wish to take the examinations held at any place other than Berkeley should notify the Dean of their intention as early as April 1st. Subjects: \* 1, 2, 3, 4, 5, 6a, b, and c; 11; 8 or 14 or 15a, or 15b, and either 10 and 13 or two of the main subdivisions (a, b, c, d,) of 12.

1. ENGLISH.—(a) The examination in this subject will pre-suppose thorough knowledge of grammar and elementary rhetoric, and a study of the following works: (1) *The Lady of the Lake*; (2) *Gayley's Classic Myths in English Literature* (Ginn & Co.), or *Bulfinch's Age of Fable*; (3) *The Alhambra*; (4) *Sir Roger de Coverley*,† (5) *Short Poems: L'Allegro, Il Penseroso, Winter, Tam O'Shanter, The De-*

\*Subjects are numbered to correspond with those of the general list of preparatory subjects for admission to the Colleges at Berkeley.

†Not the meager selection sometimes used, but the full series from the *Spectator* (*Thirty-three essays*) as published by Cassell or the American Book Co.

serted Village, The Winter Morning Walk, The Cotter's Saturday Night, The Ancient Mariner, Horatius, and selections from Byron (Syle's From Milton to Tennyson); (6) The Merchant of Venice; (7) Julius Cæsar; (8) Macaulay's Warren Hastings.

While the regular examinations will, for the present, be upon these subjects without option, teachers of approved ability, in schools on the accredited list of the University, may, after consultation with the English department, avail themselves of such substitutes as the following: for (1), The Lay of the Last Minstrel; for (3), Tom Brown at Rugby, or Ivanhoe; for (4), Addison's Select Essays (Allyn and Bacon); for (5), some twelve poems of similar scope and character; for (6) or for (7), Macbeth.

(1b) ORAL AND WRITTEN EXPRESSION.—Training in this subject enters into the proper treatment of all topics of study taken up in the school course, and extends to speaking and oral reading as well as to writing. Its aim is to secure to the student the ability to use his mother-tongue correctly, clearly, and pertinently on all the lines upon which his thought is exercised.

A written test in this subject is required of all applicants for the status of special student in the Colleges of Letters, Social Sciences, and Natural Sciences, excepting only those who hold teachers' certificates and those who desire to take only courses in art. In the case of other applicants, for the present no separate examination will be set, but note will be made of correctness of form and adequacy of expression in the various papers written by each.

2. ARITHMETIC.—No examination in this subject will henceforward be set, since the study comes regularly in the Grammar School, and its essential processes are involved in Algebra.

3. ALGEBRA.—Through Quadratic Equations; namely, the various methods of factoring, the theory of exponents, integral and fractional, positive and negative, the calculus of radicals, ratio, and proportion; quadratic equations, both single and simultaneous, their solution and their theory, including all the recognized methods of solution and all equations reducible to the quadratic form and the formation of equations from given roots.

4. PLANE GEOMETRY.—Including the general properties of regular polygons, their construction, perimeters and areas, and the different methods for determining the ratio of the circumference to the diameter.

\*5. GOVERNMENT OF THE UNITED STATES.—A knowledge of the principles of government, Federal, State and local. This requirement presupposes an acquaintance with the history of the United States.

6. LATIN.—(a) *Cæsar*, Gallic War, Books I–IV; (b) elementary Latin Grammar: forms and syntax; (c) translation into Latin of simple English sentences.

While the regular examination will be confined to the books of *Cæsar*, teachers of approved ability, in schools on the accredited list of the University, may, after consultation with the Latin Department, substitute any ten† Biographies of *Nepos* for two books of the Gallic War.

#### 8. GREEK.

(a) Greek Grammar, including accents, the ordinary inflectional forms, the simpler rules of syntax, and the translation of easy English sentences into Attic Greek. White's First Greek Book represents the amount of preparation required.

(b) *Xenophon's Anabasis*, Books I–IV, with questions on the syntax and subject-matter. Translation at sight of ordinary passages from *Xenophon*. Rolfe's edition of *Xenophon's Anabasis*, Book V, is a convenient text for practice in sight translation.

#### 10. ANCIENT HISTORY AND GEOGRAPHY.

(a) Greek history to the death of Alexander, with the connected geography.

(b) Roman history to A. D. 410, with the connected geography.

Smith's History of Greece, Myers' History of Greece, Liddell's History of Rome, will serve to indicate the amount required.

11. PHYSICS.—The requirement represents at least a daily exercise during one school year, which falls within the last two years of preparation for college. It is expected that the ground covered will include fair representation of primary empirical laws from each of the main subdivisions of Physics.

The results called for demand vigorous and thorough instruction in the class-room, based upon laboratory exercises by the pupils. In addition to the test of written examination, it will be insisted upon that each candidate submit a laboratory note book, signed by his

\*Beginning with the academic year 1901-02 this subject will be Civil Government and American History.

†But Roberts' edition of Nine Lives of *Nepos* will be accepted.

teacher, as evidence that the main principles of the subject as treated have been presented experimentally.

12. ADVANCED MATHEMATICS, CHEMISTRY, BOTANY, ZOOLOGY.

(a) *Advanced Mathematics*.—Any two of the following: 1. *Solid Geometry*. The fundamental propositions of solid and spherical geometry, accompanied by a suitable amount of exercise in problems—the whole to represent the work of one half-year. 2. *Plane Trigonometry*. The development of the general formulæ of plane trigonometry, with applications to the solution of plane triangles and the measurement of heights and distances. 3. *Advanced Algebra, Part I*. Surds and complex quantities, ratio, proportion and variation, arithmetical, geometrical and harmonic progressions, examples of other simple series, determinants, and elements of the theory of equations. 4. *Advanced Algebra, Part II*. Inequalities, limits, and indeterminate forms, exponentials, and logarithms, natural logarithms, convergency and divergency of series, indeterminate coefficients with applications to integral functions, partial fractions, expansion of functions and summation of series, permutations and combinations, the binomial theorem for any index, exponential and logarithmic series, logarithmic computation.

(b) *Chemistry*.—The preparation required will include a thorough acquaintance with the elementary principles of the science. Laboratory practice is essential.

(c) *Botany*.—A knowledge of the morphology and simpler physiology of the higher plants is required. This should be based upon a full year of practical work in the laboratory, and to some extent, also, in the field. Careful attention should be paid to the recording of observations, by notes and drawings, together with the drawing of correct inferences from the observations. It is desirable that the pupils become familiar with the easier order of flowering plants represented in the local flora. Bergen's *Elements of Botany* (Pacific Coast Edition), Spaulding's *Introduction to Botany*, and Setchell's *Laboratory Practice for Beginners*, indicate both the scope and the method of the work.

(d) *Zoology*.—To consist of the actual study of animals, and recitations, the practical work to be the center of the preparation. The practical work should be partly in the laboratory and partly in the field. The chief aim of the examinations in the subject will be to

determine how closely and accurately pupils have observed. Such guides for study as Boyer's *Elementary Biology*, Part I; Colton's *Practical Zoology*; Needham's *Elementary Lessons in Zoology*; or Dodge's *Introduction to Elementary Practical Biology*.

13. **MEDIEVAL AND MODERN HISTORY.**—Myers' *Mediæval and Modern History* will indicate the period to be covered and the amount required.

14. **ENGLISH.**—The examination in this subject will presuppose thorough acquaintance with the works named below, as regards organization and development of thought, as regards style and metrical structure, and as regards their relation to the author and his age: (1) Burke's Speech before the Election at Bristol, Macaulay's First Speech on the Reform Bill, and Webster's Reply to Hayne; (2) Poems, lyrical, reflective, didactic and satirical: Milton's *Comus*, *Lycidas* and *Sonnets* II, XVI, XIX, XXII, Dryden's *Alexander's Feast*, Pope's *Rape of the Lock*, Gray's *Elegy and the Bard*, Keats' *The Eve of St. Agnes* and *The Nightingale*, Shelley's *The Cloud* and *The Sky-lark*, Wordsworth's *Tintern Abbey*, *Laodamia*, *Ode on the Intimations of Immortality*, and *Ode to Duty*, Lowell's *The Vision of Sir Launfal*, Browning's *A Transcript from Euripides* (in *Balaustion's Adventure*), Tennyson's *The Passing of Arthur*, Chaucer's *Prologue to the Canterbury Tales*; (3) Thackeray's *The Newcomes*.

While the regular examination will be confined to these subjects, schools on the accredited list of the University may, after consultation with the English Department, make such substitutions as the following: For (1), any three oratorical masterpieces of argument (including one of Burke's); for the *Rape of the Lock*,—the *Essay on Man*, or Dryden's *The Character of a Good Parson*, Pope's *Epistles to Jervas and Boyle*, and Johnson's *The Vanity of Human Wishes*; for Chaucer's *Prologue to the Canterbury Tales*.—selections from Clough and Arnold; for the *Vision of Sir Launfal*,—Tennyson's *Enid*, or his *Gareth and Lynette*; for *Comus*,—*Paradise Lost*, Book 1, or 2, or 5, or 6; for (3)—*Silas Marner* and the *Vicar of Wakefield*, or *Henry Esmond*.

15. **A MODERN LANGUAGE.**—Namely, either of the following, involving about two years' work:

(a) *French.*—The ability to read at sight simple French prose, and to translate correctly simple English into French; a knowledge of the

principles of French grammar, as contained in any good work on the subject.

(b) *German*.—The ability to read at sight simple German prose, and to translate correctly simple English into German; a knowledge of the principles of German grammar, as contained in any good work on the subject. Ability to follow University class exercises in German, and to answer in German.

### ADVANCED STANDING

Students completing at the University of California the three years' Course Preparatory for Medicine, including Human Histology, are admitted to the Second-Year Class without examination. Upon the completion of the medical course they are given the two degrees of B. S. and M. D.

Graduates of recognized Scientific Colleges are admitted to the Second-Year Class without examination, provided their courses included one year of physics, one year of physiology, one year of histology and two years of organic chemistry, with laboratory exercises in each subject.

Students who have attended one full course in any recognized regular Medical College, requiring a matriculation examination equivalent to the one required by this institution, are admitted as students of the Second-Year Class, provided the courses are in different calendar years. The faculty reserves the right to examine such applicants in all the studies of the Freshman curriculum.

Students who have attended two or three full courses in any recognized regular Medical College requiring a matriculation examination equivalent to the one required by this institution, are admitted as students of the Third-Year or Fourth-Year Class respectively, provided the courses of lectures are in different calendar years. The Faculty reserves the right to examine such applicants in all the studies of the classes below the one to which the applicant seeks admission.

Graduates of recognized regular Medical Colleges requiring a matriculation examination equivalent to the one required by this institution and exacting attendance upon four courses are admitted as students of the Fourth-Year Class upon the same conditions as given in the preceding paragraph.



Under no circumstances is a student credited with attendance upon two courses, unless such courses have been in different calendar years.

Students who have attended one or more courses in Medical Colleges not requiring a preliminary examination equivalent to the one exacted by this institution are not admitted to advanced standing unless they meet the usual matriculation requirements as given on page 11.

Graduates of the Pharmaceutical Department of the University of California are admitted to the Second-Year Class, provided they have taken in the Medical Department the Freshman courses in anatomy, histology, embryology, physiology and physiological chemistry, and provided they meet the matriculation requirements of the Medical Department.

Graduates of the Dental Department of the University of California are admitted to the Second-Year Class provided they have taken in the Medical Department the Freshman courses in anatomy, histology, embryology, physiology, chemistry and materia medica and provided they meet the matriculation requirements of the Medical Department.

Certificates of private study under the direction of a physician are not recognized.

Theological and Law Students are admitted to special lectures without examination.

### **FEES**

Matriculation Fee (paid but once).....	\$ 5 00
Practical Anatomy Ticket for each of two years.....	10 00
Tuition Fee (for each year of attendance).....	100 00
Graduating Fee (paid but once, but not returnable).....	25 00

A Key and Breakage deposit of ten dollars is required each year for the use of lockers and to cover cost of material used in the laboratories, and damage to College building and equipment. At the close of the session the unexpended balance is returned to the students.

## REQUIREMENTS FOR GRADUATION

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I. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while at the College. The Faculty reserves the right to terminate the connection of any student with the institution at any time on the ground of what it may deem moral or mental unfitness for the profession.

II. He must have studied medicine four full years and must have attended four regular courses of lectures in separate calendar years, the last of which must have been that of the University of California.

III. He must have passed the required examinations, written and oral.

IV. He must have pursued the study of practical anatomy during at least two sessions, and must present certificates of having dissected every part of the cadaver.

V. He must have paid in full the College fees, including the graduation fee.

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## BOARDING

The expense of living in San Francisco is not great. Good board with room rent may now be procured at the low rate of five dollars per week, at a convenient distance from the College building.

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## HOSPITAL APPOINTMENTS

The position of Intern, or House Physician and Surgeon, in the City and County Hospital, is open each year to four members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year, and secure opportunities for accumulating an invaluable experience in every field of Medicine and Surgery.

On completion of the term of service, a certificate is issued by the San Francisco Board of Health and the authorities of the City and County Hospital, as evidence of the faithful performance of the required duties.

Students of the Fourth-Year Class desiring these appointments are required to make application in writing to the Dean, at least two weeks before the close of the session.

The City Emergency Hospitals are open to students and graduates of this institution. In these hospitals an excellent opportunity is afforded for experience in emergency work.

Several of the private hospitals in the city offer positions on the house staff to graduates of this College.

Assistants to the staff of the San Francisco Polyclinic are also appointed from the graduates of this institution.

#### HOSPITAL APPOINTMENTS—FROM CLASS OF 1901

CITY AND COUNTY HOSPITAL (San Francisco).—*University of California Wards*.—Wilfred F. Beerman, Walter M. Dickie, Milton B. Lennon, George P. Purlenky, Chester H. Woolsey. *Polyclinic Ward*.—Joseph M. Toner.

ST. LUKE'S HOSPITAL.—Harold P. Hill, J. Walter Seawell.

SOUTHERN PACIFIC RAIL ROAD HOSPITAL (Sacramento).—Fletcher G. Sanborn.

U. S. MARINE HOSPITAL.—Lionel S. Schmitt, John N. Force.

CHILDREN'S HOSPITAL.—Kate I. Brady, Mary F. Kavanagh.

CALIFORNIA WOMAN'S HOSPITAL.—William J. Murphy.

COUNTY HOSPITAL (Sacramento).—John L. White, William K. Lindsay.

WALDECK.—Benjamin F. Thomas.

## COURSES OF INSTRUCTION

A brief outline of the courses pursued by the several departments will be found in the following summary:

**Anatomy.**—The course in Anatomy extends through the Freshman and Sophomore years, and is divided into microscopic and macroscopic work. The microscopic study comprises Histology and Embryology, the course occupying four two-hour sessions weekly throughout the Freshman year. The student is first trained in the fundamentals of cytology, and then given systematic instruction upon all the organs and tissues. The instruction in embryology includes a study of the hatching period of the chick, and a general survey, with demonstrations, of the development of the human embryo. The laboratory of microscopic anatomy is well equipped with microscopes provided with oil immersions, imbedding ovens, microtomes and staining apparatus and reagents. The students are thus enabled to do individually and personally nearly all of the work.

The work upon gross anatomy given to the Freshman class includes:

(a) A course in Osteology and Syndesmology. The bone room is well stocked with prepared disarticulated bones, which are used by the students for study.

(b) A course in General Anatomy, which is taught by means of dissections, demonstrations and the use of dissected preparations, models, and projections. Each student dissects the entire body, with the exception of the central nervous system and the organs of special sense. Dissections are scheduled, under which arrangement the work is rapidly, systematically and thoroughly performed.

The work on gross anatomy given to the Sophomore class includes:

(a) A course in General Anatomy. This is a repetition of the work given during the Freshman year, since it is only by repetition that the subject is properly assimilated.

(b) A course upon Regional Anatomy, by demonstrations.

(c) A course in the Anatomy of the Nervous System and the organs of special sense. The work consists of dissections and demonstrations. The instruction in the nervous system is thorough, proportionate to the great importance of the subject.

**Comparative Anatomy.**—Prof. John C. Merriam, of the Academic Departments of the University, gives a course of lectures and demonstrations in Comparative Anatomy.

**Physiology.**—Physiology is studied during the first two years. The course in the laboratory extends from January of the Freshman year to January of the Sophomore year. The Laboratory work occupies eight hours a week and is supplemented by lectures, demonstrations and recitations. The practical course consists of experiments by which laboratory methods are explained and the fundamental truths of physiology demonstrated. Individual experimentation is required in muscle-physiology, circulation, respiration, digestion, nervous system and special senses, etc. Each student is required to make graphic tracings and report results.

The Physiological Laboratory is a large well-lighted room affording ample facilities for research. It is well equipped with apparatus, including Ludwig's continuous tracing kymograph, 12 spring kymographs and accessories, Bowditch interrupting clock, electro magnetic chronographs, electrically maintained tetanus springs and turning forks, 12 DuBois Raymond induction coils, Du Bois Raymond keys, moist chambers, muscle levers, spring and pendulum myographs, mechanical tetanometer, galvanometer, arterial schemes, mercurial, spring and membrane manometers, oncometers, 'sphygmographs, cardiographs, stethographs, Marcy's tambours, spirometer, reaction time chronograph, eye and ear models, phakoscope, Kuhne's artificial eye.

**Chemistry.**—The work pursued in the chemical laboratory is both qualitative and quantitative. Sufficient time is devoted to each subject to enable the student to learn not only the reactions and tests for identity, but to acquire, also, a knowledge of chemical technique sufficient to prepare him for advanced work, such as that assigned to sections. In the course prescribed, most of the important constituents, secretions and excretions of the human body are made the subject of investigation in order that metabolic changes may be studied. Thoroughness in laboratory work is exacted. The course occupies three sessions a week during the Freshman year and is subdivided as follows:

**Physiological.**—This course advances, primarily, the study of the Carbohydrates, the Fats and the Proteins.

The chemistry of the secretions and excretions embraces work on the principles and salts contained in saliva, also gastric and pancreatic secretions, including their analysis, together with the identification of their enzymes.

This includes a study of the organic and inorganic constituents of milk with estimations of fat, solids, water and ash, together with the identification of nitrogenous bodies, sugar and salts.

Foods and enzymes form the objects of correlative study in digestion experiments.

The microscopic, spectroscopic and chemical study of the blood is followed by work on bone, muscle and tendon.

Bile and its constituents are studied. This includes bilirubin, biliverdin, urobilin and cholesterol.

The chemistry of normal urine is studied under the following heads:—Specific Gravity, Acidity, Alkalinity, Sulphates, Phosphates, Chlorides, Urea, Uric Acid, Creatinin and Pigments, together with the microscopic study of unorganized sediments.

*Toxicology.*—The classification, identification and micro chemical study of the inorganic and organic poisons are the subjects of investigation.

*Water analysis.*—Qualitative and quantitative determinations in order to study the subject from a sanitary aspect.

*Food adulteration.*—Being an outline of the methods for the detection of adulterants.

*Work assigned to sections.*—On the carbohydrates: Glycogen, lactose, maltose, dextrose, dextrin.

On the fats: Saponification, emulsification, digestion, and determination of physical constants. Studies on adipose tissue.

On the proteins: Serum and ov-albumen, globulin, fibrinogen, myosin, ovi-vitellin, casein, albuminate-acid and alkali-fibrin, peptone and spleen for nucleins.

On the acids and pigments of bile: Taurocholic and cholalic acids, bilirubin, biliverdin.

General: Thyroid for colloid substance and iodine. Aqueous humor of eye. Brain for constituents. The urine for urea, uric and hippuric acid and alloxuric bases. Blood for gases. Preparation of oxyhemoglobin, hemoglobin and methemoglobin. Studies on hair, hoof and skin.

**Materia Medica.**—The course in *Materia Medica* is completed during the first year. It is divided into two parts: a laboratory course in Pharmacy, and a course of lectures and quizzes in *Materia Medica*. Both occupy two hours each week throughout the year.

In the Pharmacy course the weights and measures used in prescription writing and the various processes used in pharmacy are the subject of laboratory work. The student then studies the preparations of the United States Pharmacopœia, according to their classification as waters, liquors, tinctures, syrups, elixirs, etc. He is required to prepare several of the most important official preparations under each class. The course in *Materia Medica* includes instruction in prescription writing, with a study of both official and unofficial drugs used in medicine. The laboratory and lecture courses are completed at least two months before the close of the session, the remaining time being devoted to review lectures and quizzes on the entire subject, previous to the final examinations in Pharmacy and *Materia Medica*.

**Pathology.**—The course of instruction in the department of Pathology, which has been entirely reorganized and superbly equipped, extends through the Sophomore year. The instruction is divided into three branches: general morphological pathology, macroscopic; and microscopic; chemical pathology; bacteriology.

The course in general pathology is given during the Sophomore year. The fresh autopsy material is first demonstrated, following which each student prepares therefrom his own sections. Each student has his own desk, locker, paraffine and celloidin apparatus, dropping bottles, reagents, stains and staining dishes. The department has been fitted out with Leitz microscopes of the largest size and latest design, provided with movable stages, and with four oculars and objectives each; one such instrument is placed at the exclusive disposal of each student. From a large reserve collection of material, sections of such lesions and conditions as were not presented in the fresh tissues are furnished to the students, so that during the year all of the important pathological states are demonstrated and studied. An especial feature of this course is thorough instruction in neuropathology, under the direction of Dr. Leo Newmark. Another especial feature is the instruction in hæmatopathology. Every two students have for their exclusive use a Sahli hæmoglobinometer, and a Zeiss hæmocytometer with the Zappert counting-chamber and the Miescher pipettes. With

these instruments, supplemented by the study of stained specimens of blood, the students will attain that facility in blood examinations which is so essential in practical medicine. The objects of the course are three-fold: to elucidate the nature of disease from the biological standpoint; to teach morbid anatomy in the broadest sense of the term; and to equip the students with important diagnostic procedures. This course occupies eight hours per week during the entire session. The instruction consists of practical work solely, and includes no didactic lectures.

The course in chemical pathology is given during the Sophomore year. Its aim is to demonstrate the pathological functioning of the organs and tissues, as distinguished from the pathological appearances of organs and tissues as demonstrated in the course upon general pathology. Each student has here also his own laboratory desk, apparatus, and reagents. The course includes the chemical study of the various organs and tissues of the body in various diseases, of exudates and transudates, and of the gastric contents, the feces, and the urine. The objects of the course are twofold: to enable the students, through a comprehension of the phenomena of morbid physiology, better to understand disease from the practical standpoint; and to endow them with those most important diagnostic procedures applied to the urine, the feces and the gastric contents. This course occupies eight hours per week during the entire academic year. The instruction is composed entirely of practical laboratory work, and includes no didactic lectures.

The private laboratories of Pathology are installed, in both the morphological and chemical departments, with complete equipments of latest designs for original work. It is the intention of the University to open these laboratories, under the direction and supervision of the head of the department, to such physicians and post-graduate students as desire and are qualified to do original work. Particular information regarding these laboratories may be obtained from the Professor of Pathology.

During the Senior year a course in autopsy instruction and in gross morbid anatomy is given in the City and County Hospital. The members of the Senior Class are required to attend all the autopsies held in the Hospital. During this course students receive practical instruction in the technic of necroscopy and an extended



series of demonstrations is held upon the abundant material available in this service. The great advantage of extended instruction in gross pathology, based upon the autopsy material of the same cases which the Senior Class is daily studying in the wards of this Hospital, is obvious.

**Bacteriology.**—Instruction in Bacteriology is given during the Junior year. Equipped with the microscopic technique acquired during the Freshman and Sophomore years, and with a knowledge of general pathology, the students are prepared to study with profit this most important branch of etiology. Each student has in the laboratory of bacteriology his own desk, locker, apparatus, reagents, stains, and individual microscope of a type similar to those employed in the study of general pathology. Each student prepares his own culture media, grows his own cultures of bacteria, and studies directly their appearances and the phenomena of their life. Infectious diseases are then studied in original lesions, and the relations of micro-organisms to general and special pathological conditions are thus demonstrated. The objects of this course are two-fold: to impart a knowledge of microbiology, and to teach the diagnostic technique of practical bacteriology. The course occupies four sessions a week, and consists entirely of laboratory work.

**Therapeutics.**—This department is under the charge of Professor Dodge and Dr. Berndt. During the Sophomore year the class will be thoroughly instructed in the physiological action of drugs and the therapeutic indications for their use by Dr. Berndt.

During the Junior year the class will be taken up by Professor Dodge, who gives a course of lectures on the treatment of individual diseases. It is the aim of these lectures to set forth the etiology fully, basing thereon the treatment. The latter embraces not only the medicinal but the hygienic; the limitation as well as the use of the various remedies being taught.

The subject of Therapeutics also embraces a full course on Electro-therapeutics.

**Principles and Practice of Surgery.**—Students in the Junior and Senior years attend sixty hours, two hours per week throughout the college year, of lectures given by Professor Sherman and Associate Professor Shiels. The scheme is so arranged that the

essentials of Surgical Pathology are given every year, occupying about ten hours, and the remaining fifty hours are devoted to different subjects in the different years, so that the whole of General Surgery, especially that part which supplies the major portion of a practitioner's work, is carefully and systematically taught. The lectures will be illustrated by diagrams, black and white and in color, by enlarged photographs, by stereopticon views, and also by pathological specimens, both wet and dry.

As part of the general course, Professor Shiels gives a number of special lectures on Military Surgery, and demonstrates before the class the effect of high velocity projectiles on the body, by the use of a cadaver.

It is the intention to make the course in Surgery progressively more complete, and to present each subject in the most graphic manner possible.

Students in the Junior year attend also thirty hours, one hour per week throughout the college year, of lectures and demonstrations on Surgical Technology, by Dr. J. Henry Barbat. These lectures cover the preparation of the patient and of the surgeon and his assistants for the operation; general surgical technique, including surgical dressings, and the special technique of the principal important classical operations. The lectures are illustrated by work on the cadaver, and all anatomical and surgical points are demonstrated in detail to the class.

Students of the Senior Class will each have as part of the course fifteen hours of operative surgery on the cadaver. These will all come in the fall semester. This course will be conducted by Dr. H. Kugeler.

Quizzes are arranged for Juniors and Seniors separately. The students in the Senior year are quizzed by Professor Sherman, one-third of the class meeting him on some one evening of each week, so that every student attends a quiz once in three weeks. For each quiz a set of questions covering the work of the preceding three weeks is given out, and three students are assigned to each question. Of the three one student prepares a dissertation or short thesis on the subject of the question, and this is discussed by the other two students.

The students of the Junior year are quizzed in a similar manner, the class being subdivided into sections of convenient size.

**Practice of Medicine.**—In the course upon the Principles and Practice of Medicine, in addition to lectures and recitations, the case method of teaching is employed and clinical material and pathological specimens used to illustrate didactic work.

**Obstetrics.**—The Junior year is devoted to didactic and laboratory work, the Senior year to clinical obstetrics. Senior students attend confinement cases and obstetrical operations at the City and County Hospital. They also attend patients applying at the University's Out-patient Clinics. Obstetrical procedures are demonstrated on manikins and cadavers.

**Gynecology.**—This subject is taught didactically and clinically by Professor von Hoffmann and Dr. MacMonagle. The use of gynecological instruments is carefully shown, and the several procedures explained by means of colored charts, diagrams and manikins. Each student has an opportunity to do the minor operations on the manikin.

**Medical Jurisprudence.**—*The Law in its Relation to Public Health.* Governmental power to protect the public health; its exercise through federal, State and municipal officers; the nuisances it can abate, and the methods of so doing; its regulation of professions, of business pursuits, of the production and adulteration of food products, and of the use of property; the care of the public health in San Francisco, under general laws and the San Francisco Charter.

One hour a week during a portion of the second term.

## CLINICAL TEACHING

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*In Clinical Teaching* the plan pursued by the several Clinical Professors has for its aim the actual confronting of the students with the phenomena of disease, that the senses of sight, hearing and touch may be trained to aid in forming a correct diagnosis.

The facilities for clinical studies open to the students of the University are ample. Full access is given to the City and County Hospital, an institution containing five hundred beds, and presenting for observation perhaps every known form of disease, including those peculiar to tropical and South America. The staff of the Hospital is largely drawn from the Faculty of the University, giving them unusual advantages for developing clinical material. The Professor of Clinical Surgery has charge of three surgical wards (thirty-two beds in each), the Professor of Clinical Medicine two wards, the Professor of Obstetrics and Gynecology and the Professor of Ophthalmology, one ward each. Autopsies are conducted three times a week in the Mortuary by the Pathologist. A large operating theatre has been erected where the major and minor operations of surgery are performed in view of the class. Operating days are Tuesday and Saturday. The Hospital is situated at the junction of Twenty-second street with Potrero avenue, and is accessible from the North Beach and Mission cars, the Howard street, Mission street, Valencia street, Post, Leavenworth and Tenth street and the Bryant street lines.

## HOSPITAL CLINICS

**Clinical Surgery.**—Professor Huntington delivers clinical lectures on Practical and Operative Surgery, at the City and County Hospital, on Tuesdays, Thursdays and Saturdays, throughout the session. Especial attention is given, in a ward devoted to the purpose, to the conduct of disorders of the genito-urinary organs and venereal diseases. A course of Minor Surgery is also given. Instruction in this branch includes the application of bandages and the various dressings used in treating wounds, fractures, dislocations, etc.

**Ward Classes.**—The Senior Class is divided into sections of not more than six students. Ward class instruction at the bedside is given to each section five days a week. The students are required to do in the Laboratory of Clinical Pathology the necessary examinations of discharges, pus, dressings, blood, urine, gastric contents, etc., connected with the cases in the ward.

**Clinical Medicine.**—Professor W. W. Kerr delivers a course of lectures on Clinical Medicine at the same hospital each Tuesday, Thursday and Saturday. The course of study consists of the demonstration of cases illustrating the different phases and peculiarities which disease assumes, the examination of patients at the bedside by the student, under the guidance of the professor, together with instruction in all those details which qualify the student to discharge his duty agreeably and efficiently in the sick-room.

The students of the Third-Year Class, besides attending the clinical lectures given by Professor Kerr, are given clinical demonstrations in the wards. Particular attention is paid to Physical Diagnosis.

**Ward Classes.**—The Senior Class is divided into sections of not more than six students. Ward class instruction at the bedside is given five days a week. The same students are required to do in the Laboratory of Clinical Pathology the necessary examinations of sputum, blood, gastric contents, feces, urine, exudates, etc., connected with the cases in the wards. The Laboratory of Clinical Pathology has been recently installed and well equipped.

**Hospital Laboratories.**—In connection with the clinical course in medicine at the City and County Hospital are two laboratories; one for the use of the teaching staff, the other for the use of

the students under the direction of an assistant. They are fully equipped with microscopes, ovens, incubators, microtomes, reagents, chemical appliances and such other apparatus as is necessary for the analysis of blood, gastric contents, sputa, urine, feces, tissue, and for such original work as may be done in connection with bedside medicine.

Students attending clinical courses at the hospital will be given regular instruction in laboratory methods, and in examinations in clinical pathology and bacteriology in connection with the bedside work. Thus the student is afforded opportunity for putting into practice the knowledge acquired in the pathological and bacteriological courses and is enabled to work out in the laboratory questions arising at the bedside.

**Gynecology and Practical Midwifery.**—Professor Charles A. von Hoffmann holds a Thursday Clinic, including a course of instruction in Operative Gynecology, the use of instruments, appliances, etc. Part of the course is devoted to Clinical Midwifery, use being made of such cases of interest as may occur in the lying-in ward from time to time. The Senior students, in rotation, have opportunities for the study of Practical Obstetrics at the bedside.

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### ELECTIVES

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Students of the Senior Class are required to select three electives, one of which must be Neurology, Skin Diseases or Pediatrics.

**Neurology.**—The course in Neurology includes a laboratory course in neuro-pathology and a course of didactic and clinical instruction in nervous diseases. The students, having been well prepared in the minute and systemic anatomy of the nervous system, are qualified to pursue with profit a course in neuro-pathology, carried on along modern lines, and to study in the clinic and at the bedside the practical manifestations of disease in the nervous tissues.

In addition to the regular lectures on insanity, visits will be made to the various city and State hospitals, so that the student may be fully acquainted with the various clinical aspects of this disease.

**Diseases of the Skin.**—The clinic for diseases of the skin is utilized as far as possible for the study of pathology. Disease processes, which in many other branches of medicine are hidden, can be actually seen in a clinic for diseases of the skin. In order to

utilize the material to the fullest extent the class is divided, and Dr. A. B. Grosse takes one division and demonstrates diseases of the skin as much as possible from a physiological and anatomical standpoint, while Prof. D. W. Montgomery takes the other and lays particular stress on the pathology.

**Pediatrics.**—The course is both didactic and clinical. Lectures and recitations are held at the college building; particular attention being given to the subjects of infant feeding and the infectious diseases of childhood.

Clinics are conducted at the dispensary, which by reason of its location in a densely populated section of the city offers an extremely favorable field for the observation of the diseases peculiar to children.

**Diseases of the Eye, Ear, Nose and Throat.**—Professor Powers delivers one didactic lecture a week during the course, covering the subjects of the Eye and Ear. These lectures are illustrated by models, charts and blackboard drawings. He also conducts two clinics a week at the College Dispensary, where, in addition to operative and severe cases, he has a large out-patient clinic, including many children with many illustrations of cases as they appear in daily practice. At these clinics senior students are required, in turn, to keep record of the cases, with a view to cultivate a habit of case-writing. Professor W. E. Hopkins holds one clinic a week at the City and County Hospital and delivers a course of lectures on the Nose and Throat with quizzes.

**Genito-Urinary Surgery.**—Instruction in this branch of medicine is amply provided for. Four clinics weekly are held in the out-patient department in which a large and varied number of cases requiring special treatment pass under the observation of the class. Students are drilled in the methods of diagnosis and in the manipulation of instruments adapted to this particular line of work. Cases of grave nature are cared for in the Genito-urinary division of the City and County Hospital, where their continuous progress while under treatment can be carefully noted, and where operative procedure, if necessary, is employed.

**Orthopedics.**—The clinic in this branch presents the arranging and making of splints and braces, especially the use of plaster of Paris as a splint material; the handling of injured or diseased bones and joints, particularly the handling and surgical care of children.

## TEXT-BOOKS AND BOOKS OF REFERENCE

- ANATOMY.**—Morris, Holden (New Ed.). Reference: Gray (13th Ed.).
- PHYSIOLOGY.**—Foster, American Text-book of Physiology.
- HISTOLOGY.**—Stoehr, Bachm and Davidoff, Huber. Reference: Koelliker, Toldt.
- CHEMISTRY.**—Witthaus' Laboratory Manual, Richter's Organic Chemistry.  
Reference: Pellew's Medical and Physical Chemistry.
- PHYSIOLOGICAL CHEMISTRY.**—Hammarsten, Rockwood.
- MEDICAL CHEMISTRY.**—Bartley.
- PHARMACEUTICAL AND MEDICAL CHEMISTRY.**—Sadtler and Trimble.
- PHYSICS.**—Daniell's Medical Physics.
- MATERIA MEDICA.**—White's Materia Medica, Butler's Materia Medica, U. S. Dispensary.
- PATHOLOGY.**—Stengel, Ziegler (Trans. from 8th German Ed.), Ribbert, Ballinger's Atlas. Reference: Birch-Hirschfeld, Klebs, Bouchard.
- THERAPEUTICS.**—Butler, Hare, Shoemaker's Materia Medica and Therapeutics.  
Reference: Bartholow, Brunton, Wood, Ringer, Edes.
- HYGIENE AND MEDICAL JURISPRUDENCE.**—The Students' Hand-book of Forensic Medicine and Medical Police, Husband; Practical Hygiene, Parkes; Manual of Medical Jurisprudence, Taylor.
- PRACTICE OF MEDICINE.**—Osler, Strumpell, Anders. Reference: Allbutt's System of Medicine, Twentieth Century Practice; Nothnagel, Specielle Pathologie und Therapie; Dieulafoy, Manuel de Pathologie Interne.
- CLINICAL MEDICINE.**—Da Costa, Flint, Purdy's Practical Urinalysis, Hare's Diagnosis.
- SURGERY.**—Warren's Surgical Pathology and Therapeutics; Park's Surgery by American Authors; Erichsen's Science and Art of Surgery; Stimson's Fractures and Dislocations; Treves' Manual of Operative Surgery.
- OBSTETRICS.**—American System of Obstetrics; Practical Obstetrics by Grandin and Jarman; Playfair; Lusk.
- GYNECOLOGY.**—Clinical Gynecology by Keating and Coe; American Text-book of Gynecology; Textbook of Gynecology, Montgomery.
- NERVOUS DISEASES.**—Gowers, Strumpell, Dana, Gray, Jacob.
- MENTAL DISEASES.**—Spitzka, Clouston, Maudsley, Berkeley, Kellogg, Peterson, McPherson.
- OPHTHALMOLOGY.**—Swanzy. Reference: Noyes.
- OTOLOGY.**—Roosa. Reference: Gruber.
- RHINOSCOPY AND LARYNGOLOGY.**—Bosworth. Reference: Burnett's System.
- DISEASES OF THE SKIN.**—Norman Walker, Jackson. Reference: Diseases of the Skin, J. Nevins Hyde, Radcliffe-Crocker.
- PEDIATRICS.**—Taylor and Wells, L. Emmett Holt, Lewis Smith.
- BACTERIOLOGY.**—Muir & Ritchie, Migula Ducloux.
- GENITO URINARY AND VENEREAL DISEASES.**—White & Martin, Keyes & Chetwood, Hyde, Montgomery, Taylor.
- TOXICOLOGY.**—Blyth on Poisons; Medical Jurisprudence and Toxicology, Reese
- URINALYSIS.**—Purdy.
- PRESCRIPTION WRITING.**—Thornton's Manual.
- DICTIONARY, MEDICAL.**—Dunglison.



## THE ALUMNI ASSOCIATION

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The Alumni Association of the Medical Department of the University of California now includes in its membership all the graduates of the institution, its annual dues being voluntary contributions of one dollar from the members.

The objects of the Society are the promotion of the prosperity of our *Alma Mater*, the maintenance and cultivation of fraternal feeling among the alumni, and the advancement of the interests of medical education and the diffusion of scientific knowledge.

With these objects in view, the Association has founded a quarterly bulletin to which alumni are requested to contribute medical papers.

Professors and Teachers in the Medical Department are entitled to honorary membership with an appropriate certificate.

The meetings during 1901-1902 will be held quarterly. At these meetings medical and scientific topics will be brought up for discussion, and all present asked to participate.

Papers and reports of special cases are solicited from members outside of the city or abroad.

All alumni are cordially invited to identify themselves with the Association and assist in the promotion of its welfare.

WALLACE I. TERRY, M. D., President.

For further particulars address the Secretary of the Association,

ROSAMOND L. COX, M. D.,

705 Sutter St., San Francisco.



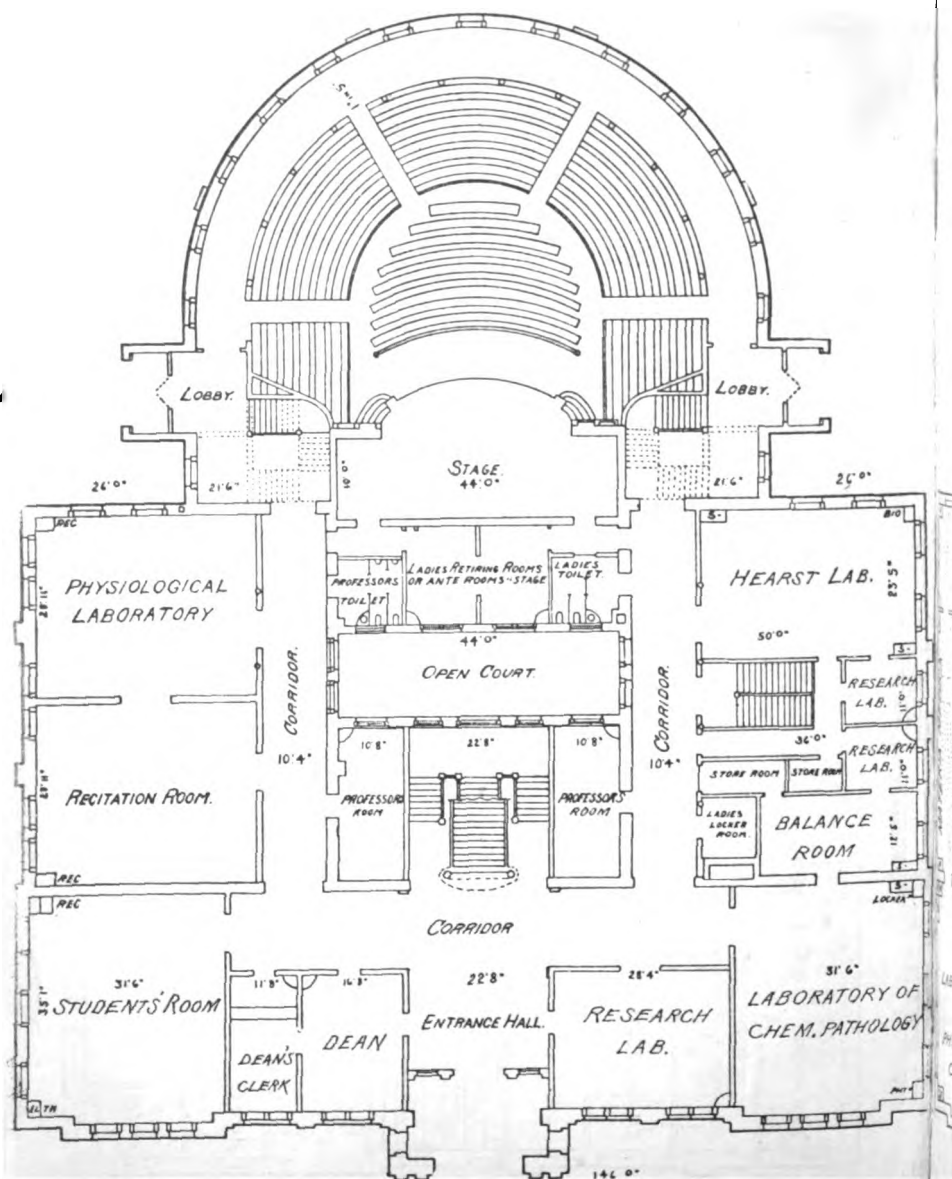


PLATE NO. II.  
PLAN OF FIRST FLOOR.

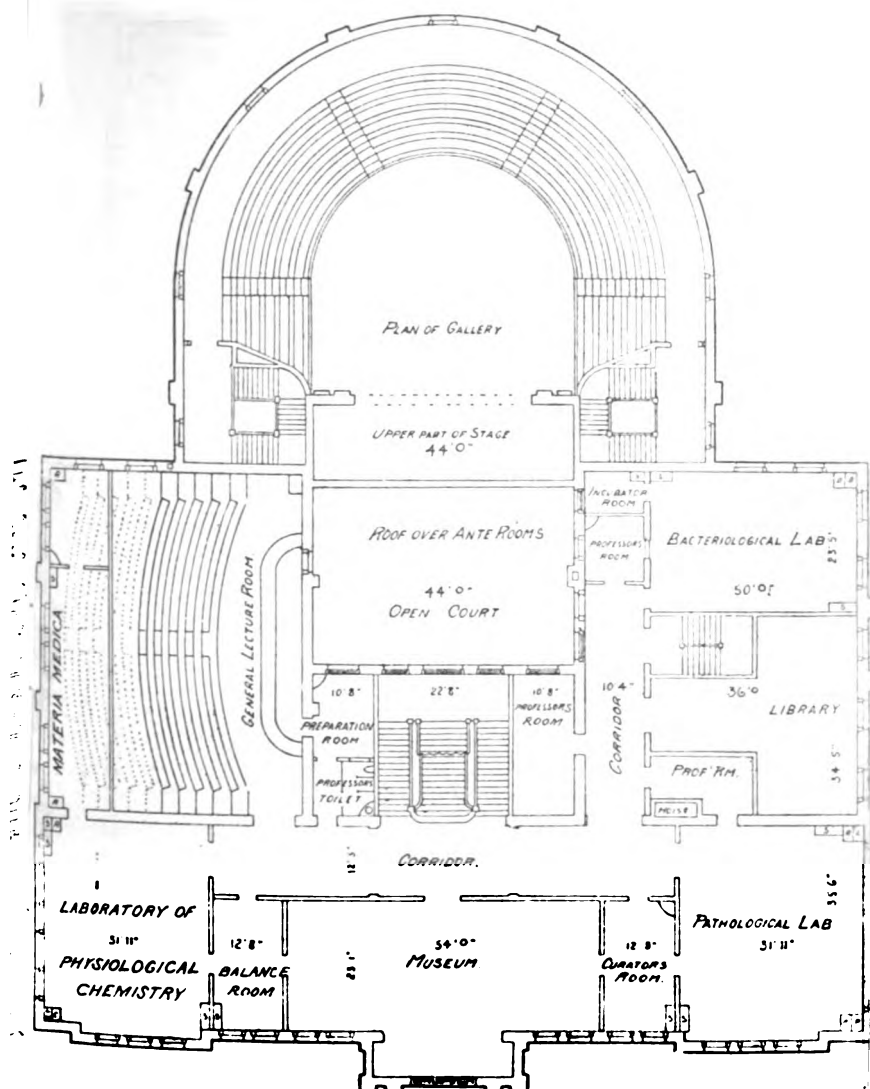


PLATE NO. III.  
PLAN OF SECOND FLOOR.

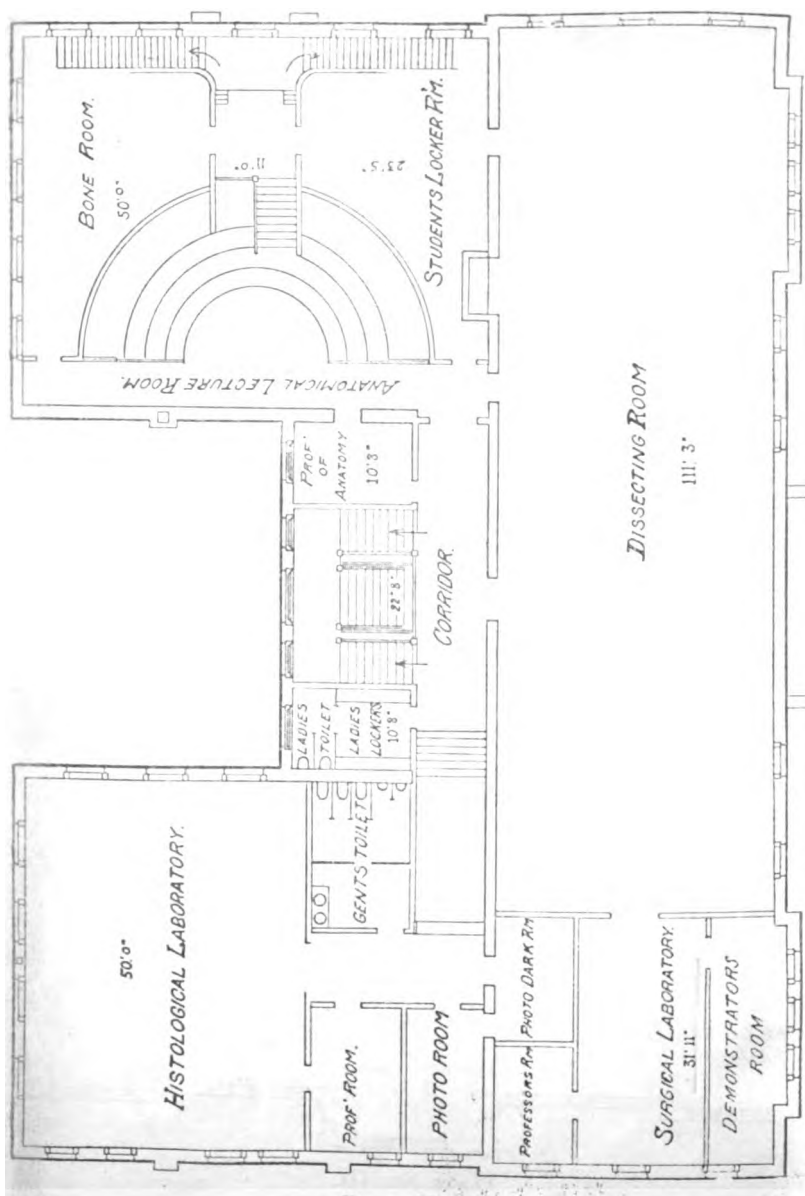


PLATE NO. IV.  
PLAN OF THIRD FLOOR.



Letters of inquiry concerning the Medical Department should be addressed to Dr. A. A. D'Ancona, Dean, Medical Department, University of California, San Francisco, Cal.

UNIVERSITY OF CALIFORNIA

ANNUAL ANNOUNCEMENT

OF

COURSES OF INSTRUCTION

IN THE DEPARTMENT OF MEDICINE

FOR THE ACADEMIC YEAR

1902-1903









# CALENDAR.

## 1902

- Aug. 8, Friday ..... Academic year in the Medical and Academic Departments begins.
- Aug. 8, Friday }  
Aug. 12, Tuesday } ..... Entrance examinations at Berkeley for the Medical and Academic Departments.
- Aug. 11, Monday }  
Aug. 16, Saturday } ..... Examination of conditioned students of advanced classes.
- Aug. 14, Thursday } 10 A. M. to 2 P. M.  
Aug. 15, Friday } ..... Applications for admission to the Medical Department; filing of credentials from accredited high schools and colleges; registration of students of all the classes of the Medical Department; payment of fees.
- Aug. 16, Saturday }
- Aug. 18, Monday ..... Class work begins.
- Aug. 20, Wednesday ..... 11 A. M. Opening exercises.
- Sept. 9, Tuesday ..... Admission Day—a holiday.
- Nov. 27, Thursday ..... Thanksgiving Day—a holiday.
- Dec. 22, Monday ..... Christmas vacation begins.

## 1903

- Jan. 5, Monday ..... Second term begins.
- March 23, Monday ..... Charter Day—a holiday.
- April 1, Wednesday ..... Summer course in histology, anatomy, physiology, pathology and bacteriology for graduates and advanced students.
- May 4, Monday ..... Examinations begin.
- May 16, Saturday ..... Term ends.

## REGENTS OF THE UNIVERSITY.

### EX-OFFICIO REGENTS.

- HIS EXCELLENCY HENRY T. GAGE, - - - - Sacramento  
*Governor, ex-officio President of the Regents.*
- HIS HONOR JACOB H. NEFF, 1154 O'Farrell St., San Francisco  
*Lieutenant-Governor.*
- HON. CORNELIUS W. PENDLETON, - - - - Los Angeles  
*Speaker of the Assembly.*
- HON. THOMAS J. KIRK, - - - - - Sacramento  
*State Superintendent of Public Instruction.*
- HON. ADOLPH B. SPRECKELS, - 327 Market St., San Francisco  
*President of the State Agricultural Society.*
- R. J. TAUSSIG, - - - - - 26 Main St., San Francisco  
*President of the Mechanics' Institute.*
- BENJAMIN IDE WHEELER, Ph.D., LL.D., 1820 Scenic Ave., B'k'ly.  
*President of the University.*

### APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

Name.	Address.	*Term Expires.
ISAIAS WILLIAM HELLMAN, ESQ.,	Nevada Nat'l. Bank, S. F.,	1918
ARTHUR RODGERS, B.S., Ph.B.,	309 Montgomery St., S. F.,	1906
JAS. FRANKLIN HOUGHTON, C.E.,	328 Montgomery St., S. F.,	1904
CHESTER ROWELL, M.D., - -	Fresno, - - - - -	1910
HON. JAMES A. WAYMIRE, -	Alameda, - - - - -	1908
HON. CHARLES WILLIAM SLACK } Ph.B., LL.B., }	309 Montgomery St., S. F.,	1910
JACOB BERT REINSTEIN, M.A.,	217 Sansome St., S. F. -	1912
JOHN ELIOT BUDD, A.B., - -	Stockton, - - - - -	1916
MRS. PHOEBE A. HEARST, - -	Mills Bldg., San Francisco,	1914
HON. W. H. L. BARNES, - -	Crocker Building, S. F.,	1912
GEORGE C. PARDEE, M.A., M.D.,	Chronicle Building, S. F.,	1914

\*Terms of Regents expire March 1.

ARTHUR W. FOSTER, ESQ., - Mutual Life Bldg., S.F., 1916  
 C. N. ELLINWOOD, M.D., - - 2739 Pacific Ave., S. F., - 1908  
 GARRETT MCENERNEY, LL.B., - Nevada Block, S. F., 1904  
 CHARLES STETSON WHEELER, A.B., 532 Market St., S. F., - 1906  
 GUY C. EARL, A.B., - - - - 10 McClure St., Oakland, 1918

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OFFICERS OF THE REGENTS.

HIS EXCELLENCY HENRY T. GAGE, - - - - Sacramento  
*President.*  
 \*EDWARD WALKER DAVIS, B.L., - - - - Colfax  
*Secretary.*  
 WILLIAM ALFRED MCKOWEN, - - Fernwald Ave., Berkeley  
*Acting Secretary and Land Agent.*  
 WILLIAM HENRY PHIPPS, - - 2713 Telegraph Ave., Berkeley  
*Clerk in Secretary's Office.*  
 HARRIE LYNWOOD WRIGHT, 525 Twenty-second St., Oakland  
*Clerk in Secretary's Office.*  
 BENJAMIN BANGS, - - - - 120 Sutter St., San Francisco  
*Agent for the Johnson Building and the Sacramento Building.*  
 JOHN J. HERR, - - - - 340 Geary St., San Francisco  
*Auditor.*  
 REBECCA MEYERSTEIN, - - 2116 Mission St., San Francisco  
*Stenographer in Secretary's Office.*  
 LOUIS SLOSS, - - - - 310 Sansome St., San Francisco  
*Treasurer.*  
 JOHN BELL MHOON, - - - 401 California St., San Francisco  
*Counsel.*

\*Absent on leave.

### FACULTY.

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- BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University, ex-officio President of the Faculty.
- ARNOLD A. D'ANCONA, A.B., M.D., Professor of Physiology; Dean.
- ROBERT A. MCLEAN, M.D., Professor of Clinical and Operative Surgery.
- GEORGE H. POWERS, A.M., M.D., Professor of Ophthalmology and Otology.
- WM. WATT KERR, A.M., M.B., C.M., Professor of Clinical Medicine.
- DOUGLASS W. MONTGOMERY, M.D., Professor of Dermatology.
- WASHINGTON DODGE, M.D., Professor of Therapeutics.
- JOHN M. WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.
- JOHN W. ROBERTSON, A.B., M.D., Professor of Nervous and Mental Diseases.
- HARRY M. SHERMAN, A.B., M.D., Professor of the Principles and Practice of Surgery.
- ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.
- WM. E. HOPKINS, M.D., Clinical Professor of Ophthalmology and Otology.
- CHAS. A. VON HOFFMANN, M.D., Professor of Gynecology.
- HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and Practice of Medicine.
- JOSEPH MARSHALL FLINT, B.S., A.M., M.D., Professor of Anatomy.
- WM. B. LEWITT, M.D., Professor of Pediatrics.
- THOS. W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.
- LEO NEWMARK, M.D., Professor of Clinical Neurology.
- FRANK T. GREEN, Ph.G., Associate Professor of Physiological Chemistry.
- GEO. F. SHIELDS, M.D., F.R.C.S.E., Etc., Associate Professor of the Principles and Practice of Surgery.
- BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.
- JAMES F. MCCONE, B.S. M.D. M.R.C.S. Eng., Lecturer on Obstetrics.

- CHARLES L. MORGAN, A.B., Ph.G., M.D., Lecturer on Materia Medica.
- LOUIS DE F. BARTLETT, A.B., LL.B., Special Lecturer on Medical Jurisprudence.
- IRVING HARDESTY, A.B., Ph.D., Instructor in Anatomy.
- J. HENRY BARBAT, Ph.G., M.D., Instructor in Surgery.
- SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.
- RICHARD M. H. BERNDT, M.D., Instructor in Therapeutics.
- HENRY A. L. RYFKOGEL, M.D., Instructor in Pathology.
- HAROLD P. HILL, A.B., M.D., Instructor in Physiology.
- HAROLD BRUNN, M.D., Instructor in Surgery.
- CLARENCE QUINAN, M.D., Instructor in Medicine.
- GEORGE E. EBRIGHT, M.D., Instructor in Medicine.
- WALLACE I. TERRY, M.D., Assistant in Surgery.
- ROBERT ORTON MOODY, B.S., M.D., Assistant in Anatomy.
- STEPHEN CLEARY, M.D., Assistant in Anatomy.
- FRED. C. BURROWS, A.M., M.D., Assistant in Medicine.
- GEO. F. REINHARDT, B.S., M.D., Assistant in Medicine.
- CHAS. M. COOPER, M.R.C.S. Eng., Assistant in Medicine.
- ALFRED NEWMAN, A.B., M.D., Assistant in Surgery.
- HENRY B. A. KUGELER, M.D., Assistant in Surgery.
- OSCAR N. TAYLOR, A.B., M.D., Assistant in Medicine.
- WM. E. STEVENS, M.D., Assistant in Medicine.
- JAMES P. DUNN, M.D., Assistant in Surgery.
- CHAS. G. LEVISON, M.D., Assistant in Surgery.
- MARSHALL B. RYER, M.D., Assistant in Surgery.
- JOHN C. SPENCER, M.D., Assistant in Genito-Urinary Surgery.
- CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.
- GEORGE H. RICHARDSON, M.D., Assistant in Genito-Urinary Surgery.
- GEORGE W. MERRITT, M.D., Assistant in Ophthalmology.
- HUGH LAGAN, M.D., Assistant in Ophthalmology.
- ROBERT H. ORR, M.D., Assistant in Ophthalmology.
- GARDNER P. POND, M.D., Assistant in Otology, Laryngology and Rhinology.
- J. MORA MOSS, M.D., Assistant in Gynecology.
- Z. T. MALABY, M.D., Assistant in Gynecology.
- ALFRED B. GROSSE, M.D., Assistant in Dermatology.
- ERNEST PRING, M.D., Assistant in Dermatology.
- HOWARD MORROW, M.D., Assistant in Dermatology.
- JOHN J. FLOOD, M.D., Assistant in Orthopedic Surgery.
- SANFORD BLUM, A.B., M.D., Assistant in Pediatrics.



J. WILSON SHIELDS, M.D., Assistant in Medicine.

GEORGE J. MCCHESENEY, A.B., M.D., Assistant in Medicine.

WM. G. MOORE, M.D., Assistant in Gynecology.

E. L. WEMPLE, JR., M.D., Assistant in Genito-Urinary Surgery.

## **SPECIAL ANNOUNCEMENT.**

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At a recent meeting of the Board of Regents of the University of California it was voted to establish a Department of Physiology on an academic basis to be provided for in the general budget of the University. Inasmuch as this announcement went to press just after the action of the Board of Regents and before the appointments in this department could be made, the work in Physiology scheduled in the present announcement will be subject to revision. Special announcement of the plans of the department will be made at the beginning of the next academic session, after the appointments have been made and the Physiological Laboratory equipped. In this connection it is a pleasure to announce that Dr. M. Herzstein of San Francisco has generously donated the necessary funds for the complete and adequate equipment of this department, which it is believed will be one of the best in the country. This will, of course, be a University Department conducted according to the highest standards and will control all of the work in Physiology offered by the University of California.



### LOCATION.

The Medical Department is located in the western part of San Francisco, at Second and Parnassus Avenues, south of Golden Gate Park. The main building has a frontage of 148 and a depth of 208 feet. Upon the ground floor are the students' lockers, the photographic and projection rooms, the anatomical preparation room, the laboratory of materia medica, storage rooms, janitor's quarters and lavatories. Situated upon the second floor are the offices of administration, the library, the students' room, the laboratory of physiology, the laboratory of chemical pathology and the private laboratories of pathology. The laboratories of chemical physiology, histology, morphological pathology and bacteriology and a lecture room are upon the third floor, while the fourth contains eight dissecting rooms, the bone room, the anatomical museum and model collection, the private laboratories of anatomy and a lecture room.

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### ADMISSION.

Students wishing to matriculate are required to undergo examinations for admission, with the following exceptions, viz:

1. Applicants who present certificates of having successfully passed the examination for admission to the College of Letters or the Colleges of Science of the University of California, or some other recognized University or College.
2. Applicants who present diplomas or certificates of graduation from the University of California, or of some other recognized University or College.
3. Applicants who present diplomas or certificates of graduation from accredited High Schools and Academies.
4. Applicants who present diplomas or certificates of graduation from a State Normal School of California, or of any other state or territory.

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### ADMISSION ON EXAMINATION.

#### TIMES, PLACES AND SUBJECTS OF EXAMINATION.

Entrance examinations are held in August and in January of

each year; but the examinations in January are primarily for the purpose of enabling students in the University to remove deficiencies incurred in previous entrance examinations. Applicants for admission who present certificates from their teachers that they are prepared in the subjects they offer will be admitted to the January examinations. Such certificates must be filed with the Recorder of the Faculties, Berkeley, before the examinations.

In 1902, examinations will be held in Berkeley, August 8-12. The University may conduct entrance examinations at the same time in any city or at any school where the number of candidates and the distance from other places of examination may warrant it. Applications for this purpose should be sent to the Recorder of the Faculties, Berkeley, by mail, not later than June 1.

After passing the entrance examinations students who do not register in the office of the Dean of the Medical Department by September 1st will be denied admission to regular class standing unless they obtain special permission from heads of the departments in which they begin their work.

Matriculants who do not present satisfactory credentials are required to pass the examinations in the subjects named below. Subjects: 1, 2, 3, 4, 5, 6a, b, and c; 11; 8 or 14 or 15a, or 15b, and either 10 and 13 or two of the main subdivisions (a, b, c, d) of 12.

**A. Oral and Written Expression.**—Training in this subject enters into the proper treatment of all topics of study taken up in the school course and extends to speaking and oral reading as well as to writing. Its aim is to secure to the student the ability to use his mother-tongue correctly, clearly, and pertinently on all lines upon which his thought is exercised.

A written test in this subject is required of all applicants for the status of special student in the Colleges of Letters, Social Sciences, Natural Sciences, and Commerce, excepting only those who hold teachers' certificates. In the case of other applicants, for the present no separate examination will be set, but note will be made of correctness of form and adequacy of expression in the various papers written by each.

1. **English.**—(2 units.) The examination in this subject will presuppose thorough acquaintance with the following works, together with the practical knowledge of grammar and elementary rhetoric implied in such acquaintance: (1) *The Lady of the Lake*; (2) *The Alhambra*; (3) *Sir Roger de Coverley*; (4) *Classic Myths*; (5) *Short Poems*; *Horatius*, *The Deserted Village*, *The Cotter's Saturday Night*, *The Prisoner of Chillon* (or *Selections*

from Childe Harold), Winter, Winter Morning Walk, Snow-Bound, Tam O'Shanter, The Ancient Mariner, L'Allegro, and Il Penseroso; (6) The Merchant of Venice; (7) Julius Caesar; (8) Macaulay's Warren Hastings.

While the regular examination will, for the present, be upon these subjects without option, schools on the accredited list of the University may, after consultation with the English Department, make such substitutions as the following: for (1), The Lay of the Last Minstrel; for (2), Tom Brown at Rugby, or Ivanhoe; for (3), Addison's Select Essays; for (5), some twelve poems of similar scope and character; for (6) or for (7), Macbeth.

2. **Arithmetic.**—No examination in this subject will henceforward be set, since the study comes regularly in the grammar school, and since its essential processes are involved in Algebra.

3. **Algebra.**—(1½ units). Through Quadratic Equations; namely, the various methods of factoring, the theory of exponents, integral and fractional, positive and negative; the calculus of radicals; ratio and proportion; quadratic equations, both single and simultaneous, their solution and their theory, including all the recognized methods of solution, all equations reducible to the quadratic form and the formation of equations from given roots.

4. **Plane Geometry.**—(1 unit.) Including the general properties of regular polygons; their construction, perimeters and areas; and the different methods for determining the ratio of the circumference to the diameter.

5. **History and Government of the United States.**—(1 unit.) A knowledge of the outline of American History, and of the nature of Federal, State and local government.

6. **Latin.**—(a) Caesar, Gallic War, Books I-IV; (b) elementary Latin Grammar, forms and syntax; (c) translation into Latin of simple English sentences.

While the regular examination will be confined to the books of Caesar, teachers of approved ability, in schools on the accredited list of the University, may, after consultation with the Latin Department, substitute any ten Biographies of Nepos for two books of the Gallic War.

#### 8. **Greek.**

(a) Greek Grammar, including accents, the ordinary inflectional forms, the simpler rules of syntax, and the translation of easy English sentences into Attic Greek. White's First Greek Book represents the amount of preparation required.

'But Roberts' edition of Nine Lives of Nepos will be accepted.

(b) Xenophon's *Anabasis*, Books I-IV, with questions on the syntax and subject-matter. Translation at sight of ordinary passages from Xenophon. Rolfe's edition of Xenophon's *Anabasis*, Book V, is a convenient text for practice in sight translation.

10. **Ancient History and Geography.**

(a) Greek history to the death of Alexander, with the connected geography.

(b) Roman history to A. D. 410, with the connected geography.

Smith's *History of Greece*, Myers' *History of Greece*, Liddell's *History of Rome*, will serve to indicate the amount required.

11. **Physics.**—The requirement represents at least a daily exercise during one school year, which falls within the last two years of preparation for college. It is expected that the ground covered will include fair representation of primary empirical laws from each of the main subdivisions of Physics.

The results called for demand vigorous and thorough instruction in the class-room, based upon laboratory exercises by the pupils. In addition to the test of written examination, it will be insisted upon that each candidate submit a laboratory note book, signed by his teacher, as evidence that the main principles of the subject as treated have been presented experimentally.

12. **Advanced Mathematics, Chemistry, Botany, Zoölogy.**

(a) *Advanced Mathematics.*—(1 unit.) Any two of the following: (1) *Solid Geometry.* The fundamental propositions of solid and spherical geometry, accompanied by a suitable amount of exercise in problems—the whole to represent the work of one half-year. (2) *Plane Trigonometry.* The development of the general formulae of plane trigonometry, with applications to the solution of plane triangles and the measurement of heights and distances. (3) *Advanced Algebra, Part I.* Surds and complex quantities, ratio, proportion and variation, arithmetical, geometrical and harmonic progressions, examples of other simple series determinants and elements of the theory of equations, including the solution of numerical equations by Horner's Method. (4) *Advanced Algebra, Part II.* Inequalities, limits and indeterminate forms, exponentials and logarithms, natural logarithms, convergency and divergency of series, indeterminate coefficients with applications to integral functions, partial fractions, expansion of functions and summation of series, permutations and combinations, the binomial theorem for any index, exponential and logarithmic series, logarithmic computation.

(b) *Chemistry.*—(1 unit.) The preparation required will include

a thorough acquaintance with the elementary principles of the science. Laboratory practice is essential.

(c) *Botany*.—(1 unit.) A knowledge of the morphology and simpler physiology of the higher plants is required. This should be based upon a full year of practical work in the laboratory and to some extent, also, in the field. Careful attention should be paid to the recording of observations, by notes and drawings, together with the drawing of correct inferences from the observations. It is desirable that the pupils become familiar with the easier orders of flowering plants represented in the local flora. Bergen's Elements of Botany (Pacific Coast Edition), Spaulding's Introduction to Botany, Setchell's Laboratory Practice for Beginners, and Jepson's Flora of Western Middle California, indicate both the scope and the method of the work.

(d) *Zoölogy*.—(1 unit.) To consist in the actual study of animals and recitations, the practical work to be the center of the preparation. The practical work should be partly in the laboratory and partly in the field. The chief aim of the examinations in the subject will be to determine how closely and accurately pupils have observed. Such guides for study as Boyer's Elementary Biology, Part I; Colton's Practical Zoölogy; Needham's Elementary Lessons in Zoölogy; or Dodge's Introduction to Elementary Practical Biology.

13. *Mediaeval and Modern History*.—(1 unit.) Myers' Mediaeval and Modern History will indicate the period to be covered and the amount required.

14. *English*.—(2 units.) The examination in this subject will presuppose thorough acquaintance with the works named below, as regards organization and development of thought, as regards style and metrical structure, and as regards their relation to the author and his age: (1) Burke's Speech before the Election at Bristol; Macauley's First Speech on the Reform Bill; Webster's Reply to Hayne; (2) Poems, lyrical, reflective, didactic and satirical: Milton's Comus, Lycidas and Sonnets II, XVI, XIX, XXII, Dryden's Alexander's Feast, Pope's Rape of the Lock, Gray's Elegy and the Bard, Keats' The Eve of St. Agnes and The Nightingale, Shelley's The Cloud and The Skylark, Wordsworth's Tintern Abbey, Laodamia, Ode on the Intimations of Immortality, and Ode to Duty, Lowell's The Vision of Sir Launfal, Browning's A Transcript from Euripides (in Balaustion's Adventure), Tennyson's The Passing of Arthur, Chaucer's Prologue to the Canterbury Tales; (3) Thackeray's The Newcomes.



While the regular examination will be confined to these subjects, schools on the accredited list of the University may, after consultation with the English Department, make such substitutions as the following: For (1), any three oratorical masterpieces of argument (including one of Burke's); for the Rape of the Lock—the Essay on Man, or Dryden's The Character of a Good Parson, Pope's Epistles to Jervas and Boyle, and Johnson's The Vanity of Human Wishes; for Chaucer's Prologue to the Canterbury Tales—selections from Clough and Arnold; for the Vision of Sir Launfal—Tennyson's Enid, or his Gareth and Lynette; for Comus—Paradise Lost, Book 1, or 2, or 5, or 6; for (3)—Silas Marner and the Vicar of Wakefield, or Henry Esmond.

15. **A Modern Language.**—Namely, either of the following, involving about two years' work:

(a) *French.*—The ability to read at sight simple French prose, and to translate correctly simple English into French; a knowledge of the principles of French grammar, as contained in any good work on the subject.

(b) *German.*—The ability to read at sight simple German prose, and to translate correctly simple English into German; a knowledge of the principles of German grammar, as contained in any good work on the subject. Ability to follow University class exercises in German, and to answer in German.

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### REQUIREMENTS FOR ADMISSION BEGINNING WITH THE ACADEMIC SESSION 1905-06.\*

Beginning with the academic session of 1905-06 the Medical Faculty will demand at least two full years of college work from all applicants for admission.

This regulation renders it necessary for the applicant to present, as part of the high or secondary school preparation for the academic work, the highest entrance requirements in English, mathematics and chemistry, designated in the Register of the University of California as Subjects 14, 12A (1 and 2), and 12B, as well as the physics, Latin and history required for entrance under Subjects 11 and 1 to 7 inclusive. Further qualifications in modern languages are very desirable before the student enters upon the preliminary academic work required of all applicants for admission to the Medical Department.

\*The Faculty of the Medical Department of the University reserves the right to make these requirements active beginning with the academic session 1903-4 if it be judged the best policy for the Department.

Beginning with the academic year 1905-06 all students desiring to enter the first year of the medical course and all new students seeking advanced standing must present evidence of having completed at least two full years of preliminary training in the undergraduate department of a college or university of recognized standing. Satisfactory evidence must also be presented that during these two years the applicant has completed courses of the following values:

**Chemistry.**—(1) A course in general inorganic chemistry, including lectures, recitations and laboratory work. *Lectures and recitations two or three hours; laboratory work five or six hours a week throughout one year.* In this course should be included the main facts of physical chemistry.

(2) Quantitative analysis. Gravimetric and volumetric. *Laboratory nine hours a week, one half-year.*

(3) Organic Chemistry. A course of lectures, demonstrations and recitations in organic chemistry. *Two hours a week, one half-year.*

Courses 1, 2, 3, 4, 5A and 8 in the Department of Chemistry in the University of California cover the work outlined above, which constitutes the minimum required amount of chemistry.

**Physics.**—(1) A course in general physics, including lectures, recitations and laboratory work. *Seven hours per week throughout one year.*

(2) A laboratory course in physical measurements. *Six hours per week throughout one year.*

Courses 1 and 3 in the Department of Physics of the University of California cover the work outlined above, which constitutes the minimum required amount of physics.

**Biology.**—(1) A general course in zoölogy, giving a knowledge of the main facts of biology, covering structure, life-history and vital activities of selected types of animal life. The chief points of cytology and development, as well as a clear conception of the doctrine of descent, should also be given in this course. *Two hours a week throughout one year.*

(2) Laboratory work in zoölogy covering the points brought out in Course 1, with objectivity and the training of the powers of observation as its special features. Practice in the recording of scientific phenomena both by means of word description and drawings should also be given. *Six hours per week throughout one year.*

Courses 1A and 1B in the Department of Zoölogy in the Uni-

versity of California cover, in general, the minimum work required in biology.

**English.**—A course in English composition consisting of consultation and theme work. *At least three hours per week throughout one year.*

**French and German.**—Applicants must possess a reading knowledge of scientific French and German.

The standard in the required courses outlined above must correspond and be at least equal to those given in the academic department of this University.

It is suggested that students should also during their preliminary academic training take certain elective courses which would materially increase the efficiency of the preparation for their later work in medicine. Advanced mathematics, comparative anatomy, embryology, laboratory work in organic chemistry and advanced work in physics covering the theory of solutions are courses of this nature. Entering students, therefore, are urged to present them on admission with the required work. The adequate training of a physician certainly presupposes a knowledge of physics, chemistry, biology and the modern languages as outlined above; but the need of a broad foundation in general culture can not be over-estimated, and students should select from the curricula of their colleges as many courses as possible beyond those demanded and recommended by the Faculty of the Medical Department.

Although the preliminary collegiate work will not be required of all students until the session of 1905, those who enter the medical school before that time are urged for the sake of their future work in medicine to conform as nearly as possible to the preparation outlined above, and to present on admission as many of the courses in physics, chemistry and biology as circumstances permit.

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### ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second, third and fourth years' classes only upon examinations covering the subjects in which they seek to be accredited. They must first present to the administrative officer evidence that they have satisfied the regular matriculation requirements, and obtain from the Dean authorization for examination.

**JOINT COURSE IN NATURAL SCIENCE AND MEDICINE  
GRANTING IN SIX YEARS THE DEGREES OF  
B.S. AND M.D.**

Beginning with the academic session of 1905,\* when the new entrance requirements of the Medical Department go into effect, all students who satisfactorily complete the first two years of medicine will be admitted to the degree of B.S. in this University. This follows because the new requirements and the present pre-medical course are precisely similar, and all students would then enter the joint course now established by the combined action of the Medical Faculty and Academic Council on advanced standing. This plan goes into effect in the academic year 1902-03 and covers six years' residence in the University, two in the College of Natural Sciences of Berkeley and four in the Medical School in San Francisco. The members of the Medical Department teaching the scientific branches become *ipso facto* members of the Faculty of the College of Natural Sciences, and on satisfactory completion of the first two years of the medical course, this faculty recommends the student for the degree of B.S.

The requirements for entrance in this course are those of the College of Natural Sciences, except that in Subject 12, mathematics and chemistry must be offered. Prospective students who contemplate taking this course are advised to present, likewise, additional credits in modern languages and mathematics. The following is an outline of the course in the College of Natural Sciences at Berkeley covering a period of two years:

	UNITS.		UNITS.
English .....	4	Chemistry .....	15
French .....	6	Zoölogy .....	15
German .....	6	Military Sci. and Physical	
Mathematics .....	6	Culture .....	4
Physics .....	12		
<b>Total .....</b> 68 units.			

The details concerning the extent and scope of these courses can be found in the new entrance requirements for the Medical Department in which their content and aim are briefly described. Since the two years work in the College of Natural Sciences is largely spent in prescribed work, little time is allowed for other subjects in general culture; and as students are urged to elect such courses, this can best be done by extending their period of

\*The Medical Faculty reserves the right to make these new requirements active at the beginning of the academic year 1903-04 if it be judged the best policy for the department.

residence in the collegiate department to three years.

Students intending to take the course should enter upon it at the beginning of the freshman year. They should also seek the advice of the Chairman or some other member of the Joint Committee of the Academic and Medical Faculties before making out their schedule of studies for the first term of the freshman year.

After the completion of their work in the Academic Department in Berkeley, students enter the Medical School to complete the studies leading up to the Bachelor's degree. This consists of

	Units.
Anatomy .....	38
Physiology .....	19
Pathology .....	19
Total .....	76

The work of these courses is described in detail in another part of this announcement.

After receiving the bachelor's degree, students enter upon the two years' study of the clinical branches of medicine, and upon satisfactory completion of these are granted the degree of M.D.

Special note should be taken by all students looking to the study of medicine in this University, that the preliminary course here described is in its essentials the only preparation that will admit to the clinical branches of medicine. Those, therefore, who are enrolled in the Colleges of Letters or Social Sciences, or in any of the technical colleges, and desire to study medicine, will need to supplement the usual courses in these colleges by such essentials of the course here outlined (French, German, Physics, Chemistry and Biology) as may not have been included in their original schedules.

### HOSPITAL APPOINTMENTS.

The position of Interne, or House Physician and Surgeon, in the City and County Hospital, is open each year to five members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year and secure opportunities for accumulating an invaluable experience in various fields of medicine and surgery. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the Medical Department or competitive examination.

**BOARDING.**

The expense of living in San Francisco is not great. Good board with room rent may be procured at the rate of five dollars per week at a convenient distance from the college building.

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**CLINICAL FACILITIES IN SAN FRANCISCO.**

The clinical work of the Medical Department is given in the Out-Patient Dispensary, which is situated on New Montgomery Street in a densely populated district of the city and has a large clientele of patients of the poorer class. The dispensary is open from 9 a. m. until 6 p. m. each day and students of the third and fourth years have practical instruction upon the various ambulatory cases that present themselves for treatment. The ward work and clinics are held in the wards of the City and County Hospital where an abundance of material of all sorts is obtained for the work in medicine, surgery and gynecology. Through the liberal policy of the Board of Supervisors and the Board of Health the medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department. In the near future, however, it is to be hoped that some liberal minded citizen will make a donation for a University Hospital which will be completely under the control of the institution and where even more extensive opportunities for bedside instruction can be given to the students during their clinical years.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded. Through the courtesy of the government officials at the Presidio it is hoped that a certain amount of this material and many specimens will be available for the instruction of students.

Thus far none of the numerous private hospitals has been available for medical instruction, but it is hoped that their directors may soon throw open their wards for the use of the students.

The Board of Supervisors contemplates the erection of a new City and County Hospital on the pavilion system which will be modern in every respect and will provide improved laboratory and clinical facilities for medical students.

**FEES.**

Matriculation Fee (paid but once) - - - \$ 5.00

Tuition Fee (for each year of attendance) - 150.00

Graduation Fee (paid but once, but not returnable) 25.00

A key and breakage deposit is required each year for the use of lockers and to cover cost of material used in the laboratories, and damage to college building and equipment. At the close of the session the unexpended balance is returned to the students. The deposit is:

For the first-year class, \$15.00

For the second-year class, 15.00

For the third-year class, 10.00

For the fourth-year class, 10.00

A rental of \$5.00 per year is charged for the use of a microscope, and \$2.00 for an immersion lens. In the first and second years each student must provide himself with a microscope, while in the third year two students are permitted to use the same instrument. In case the department is unable to supply the students with them, arrangements will be made with a firm in San Francisco to rent microscopes at the college rate. Students are urgently advised to purchase instruments for their own use.

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**LIBRARY.**

The library and reading room of the Medical Department is on the first floor of the main building and contains about 2,300 volumes. The catalogue shows that there are on the shelves many of the current text-books and some of the better monographs. Along certain lines the library is particularly strong and it will be the policy of the department by frequent purchases to make the collections uniform and to obtain as soon as possible complete files of the more important periodicals published in English, French and German. Among the journals in the library are the following, with the exception of occasional missing volumes, the sets of which are complete:

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger Anatomische Hefte, Annals of Surgery, Archiv für Anatomie und Entwicklungsgeschichte, Archiv für Entwicklungsmechanik der Organismen, Archiv für Klinische Chirurgie, Archiv für Pathologische Anatomie und Physiologie, Archives of Surgery,

Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berliner Klinische Wochenschrift, Boston Medical and Surgical Journal, British Medical Journal, Centralblatt für Bakteriologie und Parasitenkunde, Centralblatt für Chirurgie, Centralblatt für Gynecologie, Centralblatt für Klinische Medicin, Congres Francais de Chirurgie, Deutsche Medicinische Wochenschrift, Ergebnisse der Anatomie und Entwicklungsgeschichte, Fortschritte der Medicin, Jahrbücher der Gesamten Medicin, Jahresbericht der Gesamten Medicin, Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte, Jahresbericht über die Fortschritte der Anatomie und Physiologie, Jahresbericht über Pathogenen Mikroorganismen, Journal of the American Medical Association, Journal of Comparative Neurology, Journal of Experimental Medicine, Journal of Hygiene, Journal of Medical Research, London Lancet, Medical Record, Medical Review of Reviews, Morphologische Arbeiten, New York Medical Journal, Philadelphia Medical Journal, Revue de Chirurgie, Transactions of American Surgical Association, Verhandlungen der Deutschen Gesellschaft für Chirurgie, Wiener Medizinische Wochenschrift, Zeitschrift für Chirurgie, Zeitschrift für Morphologie und Anthropologie.

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## ORGANIZATION OF INSTRUCTION.

### Session of 1902-03.

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#### SUMMARY OF COURSES.

In conformity with the practice of the University, instruction is divided into three classes, didactic, demonstrative and practical. Under the head of didactic instruction are comprised lectures, recitations and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory sessions, bedside study and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value. This is likewise the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course con-



stitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represents the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible the work has been concentrated. The advantages of concentration are many. The system offers more work to the student, and is conducive to favorable conditions of study in that students in the prolonged and consecutive periods apply themselves better and enter more deeply into the subject. It also grants to the student much more free time, time of the greatest value for purposes of private study or advanced work.

It is believed that the students on account of this free time will take advantage of the elective courses offered by the departments of anatomy and pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

In the tabulation are represented the hours and units of work which each student receives.

YEAR AND SUBJECT.	Didactic.		Demonstration Clinic.		Practical.	
	Hours	Units	Hours	Units	Hours	Units
<b>First Year.</b>						
Histology, Microscopic Organology, Neurology.....	108	6			216	4
Systematic Anatomy, Osteology, Dissections, Embryology.....	36	2			612	17
General Physiology.....	108	6				
Chemical Physiology.....					180	3½
<b>Second Year.</b>						
Systematic Anatomy.....	36	2			252	7
General Physiology.....	72	4			144	2½
Morphological Pathology.....					288	8
Chemical Pathology.....					180	5
Bacteriology.....					216	6
Physiological Action of Drugs.....	54	3				
Total.....		23				53
<b>Third Year.</b>						
Materia Medica.....					36	1
Therapeutics.....	72	4				
Medicine.....	72	4	144	4	234†	4½
Surgery.....	72	4	108	3	108* 126†	4½
Obstetrics.....	108	6				
Laboratory Diagnosis.....					108	3
<b>Fourth Year.</b>						
Medicine.....	72	4	162	4½	90	1½
Surgery.....	72	4	108	3	36* 90†	2½
Operative Obstetrics.....			36	1		
Gynaecology.....	36	2	72	2	18	½
Autopsies.....			36	1		
Total.....		28		18½		20
<b>Electives, 3 required.</b>						
Pediatrics.....	36	2			72	1 ⅓
Diseases of the Skin.....					72	1 ⅓
Clinical Neurology.....	36	2	36	1	36	½
Ophthalmology.....	36	2			72	1½
Otology, Rhinology, Laryngology.....			36	1	36	½
Orthopaedics.....					108	2
Genito-Urinary Diseases.....			36	1	108	2
Total.....		6		3		9 ⅓

\*Not given during 1901-2.

†Laboratory work.

‡Work with patients.

### CLASS STANDING AND EXAMINATIONS.

For the determination of class-standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed With Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendations for Internships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways; by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

First year: Microscopic anatomy and chemical physiology.

Second year: Systematic human anatomy (including embryology), physiology, morphological pathology, chemical pathology and bacteriology.

Third year: Therapeutics, materia medica, obstetrics, internal medicine and general surgery.

Fourth year: Internal medicine, clinical medicine, general surgery, clinical surgery, gynecology, operative obstetrics and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that more than one condition can not be carried into the second, third or fourth year and this must be passed in order to render the student eligible for the examinations held at the end of that session. Under all circumstances, however, prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examina-

tions at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year. The Faculty reserves the right to sever at any time the connection of any student with the Medical Department for what it deems either mental or moral unfitness for a career in medicine.

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### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.
3. He must have done the required work and passed the stated examinations.
4. He must have paid in full the college fees, including the graduation fee.

# SCHEDULE OF COURSES.

## FIRST YEAR.

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8.30-11.30	Microscopic Anatomy Didactic & Pract'l 36 weeks		Microscopic Anatomy Didactic & Pract'l 36 weeks		Microscopic Anatomy Didactic & Pract'l 36 weeks	
11.30-12.30	Physiology Didactic 36 weeks		Physiology Didactic 36 weeks		Physiology Didactic 36 weeks	
1.30-5.30	<p>Osteology, Practical Daily. 6 weeks August 18—October 4</p> <p>Systematic Anatomy, Practical Daily. 21 weeks October 6—March 7</p> <p>Chemical Physiology, Practical Daily. 9 weeks March 9—May 8</p>					

# SECOND YEAR.

Hours			
8.30-12.30	<p>Physiology Practical 9 weeks Monday, Tuesday, Thursday, Saturday Aug. 18-Oct. 18</p>	<p>Morphological Pathology, Practical 18 weeks Monday, Tuesday, Thursday, Saturday Oct. 30-March 7</p>	<p>Bacteriology Practical 9 weeks Daily March 9-May 9</p>
1.30-4.30	<p>Physiology Practical Wednesday, Friday Aug. 18-Oct. 4</p>	<p>Systematic Anatomy, Practical 18 weeks Daily Oct. 6-Feb. 14</p>	<p>Chemical Pathology 9 weeks, 5 days March 9 May 19</p>
4.30	<p>Physiology Didactic, 34 weeks, Monday, Wednesday, Friday/ Aug. 18-Feb. 14</p>		
5.30	<p>Pharmacology, Didactic, 27 weeks, Tuesday, Thursday Aug. 18-March 7</p>		

# THIRD YEAR.—Forenoon.

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8	Medicine Didactic				Medicine Didactic	
9	Surgery Didactic	Medicine Clinic		Medicine Clinic	Surgery Didactic	Medicine Clinic
10	Obstetrics Didactic	Surgery Practical $\frac{1}{2}$ year Medicine Practical $\frac{1}{2}$ year		Medicine Practical $\frac{1}{2}$ year Surgery Practical $\frac{1}{2}$ year	Therapeutics Didactic	[Medicine Practical $\frac{1}{4}$ year Surgery Practical $\frac{1}{4}$ year
11	Therapeutics Didactic	Surgery Clinic	Obstetrics Didactic	Surgery Clinic	Obstetrics Didactic	Surgery Clinic

# THIRD YEAR.—Afternoon.

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	Surgical Pathology, 9 weeks					
2	Laboratory Diagnostics, 9 weeks.					
3.30	Medicine Dispensary $\frac{1}{2}$ year	Surgery Dispensary $\frac{1}{2}$ year	Medicine Dispensary	Surgery Dispensary $\frac{1}{2}$ year	Medicine Dispensary	
4.30	Medicine Dispensary $\frac{1}{2}$ year	Surgery Dispensary $\frac{1}{2}$ year	Medicine Dispensary	Surgery Dispensary $\frac{1}{2}$ year	Medicine Clinic	



# FOURTH YEAR.—Forenoon.

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8	Medicine Didactic	Ophthalmology Clinic	Pediatrics Clinic Orthopedics Practical	Obstetrics Clinic	Medicine Didactic	Genito-Urinary Clinic
9	Surgery Didactic	Medicine Clinic	Pediatrics Practical Orthopedics Practical	Medicine Clinic	Surgery Didactic	Medicine Clinic
10	Operative Surgery 1 Section each ¼ year	Gynaecology Clinic	Pediatrics Practical Orthopedics Practical	Otology Laryngology Rhino-logy Clinic	Clinical Neurology Didactic	Gynaecology Clinic
11	Gynaecology Practical	Surgery Clinic	Surgery, Practical 9 weeks Medicine Practical 9 weeks Gynaecology Practical 18 weeks	Surgery Clinic	Gynaecology Didactic	Surgery Clinic

**FOURTH YEAR.—Afternoon.**

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<b>3.30</b>	Medicine Practical $\frac{1}{2}$ year Clinical Neurology Dispensary $\frac{1}{2}$ year	Medicine Practical $\frac{1}{2}$ year Clinical Neurology Dispensary $\frac{1}{2}$ year	Diseases of the Skin Eye Dispensary	Surgery Practical $\frac{1}{2}$ year Ear, Eye Dispensary $\frac{1}{2}$ year	Surgery Practical $\frac{1}{2}$ year Ear, Eye Dispensary $\frac{1}{2}$ year	
<b>4.30</b>	Autopsies $\frac{1}{2}$ year Medicine Dispensary 9 weeks Surgery Dispensary 9 weeks	Autopsies $\frac{1}{2}$ year Medicine Dispensary 9 weeks Surgery Dispensary 9 weeks	Diseases of the Skin Eye Dispensary	Autopsies $\frac{1}{2}$ year Medicine Dispensary 9 weeks Surgery Dispensary 9 weeks	Autopsies $\frac{1}{2}$ year Medicine Dispensary 9 weeks Surgery Dispensary 9 weeks	
<b>5.30</b>	Medicine Clinic $\frac{1}{2}$ year	Genito-Urinary Dispensary	Medicine Clinic $\frac{1}{2}$ year	Genito-Urinary Dispensary	Genito-Urinary Dispensary	

## COURSES OF INSTRUCTION.

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### ANATOMY.

JOSEPH MARSHALL FLINT, M.D., Professor of Anatomy.

IRVING HARDESTY, Ph.D., Instructor in Anatomy.

ROBERT ORTON MOODY, M.D., Assistant in Anatomy.

STEPHEN CLEARY, M.D., Assistant in Anatomy.

A. W. LEE, M.D., Voluntary Assistant.

EDWARD MILLER, Technical Assistant.

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The courses of instruction in anatomy are given in the Hearst Anatomical Laboratory, which occupies rooms on several floors in the main medical building. The laboratories of the department have been entirely rebuilt and newly equipped. On the top floor are eight small dissecting rooms with capacity from one to three tables each. The rooms are lighted from the ceilings, well ventilated, and fitted with special reference to the effect of a clean and pleasant environment upon the work of the students. The classes are divided into small groups in order to avoid the inevitable noise and disturbance which results from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins at any desired pressure. After this process is completed the bodies are preserved in wood alcohol vapor.

The teaching museum, consisting of specially prepared corruptions, injections, dissections and models, is located in a large hall near the dissecting rooms. Here Steger's plaster models, the embryological series of Ziegler and the Tramond models of the organs of special sense are kept for the purpose of aiding the students in their work.

The laboratory for microscopic anatomy is very large and has abundant north light. It is outfitted with microtomes and all the

stains and reagents necessary for the ordinary and finer methods of microscopic preparation. The Zeiss stereoscopic microscope, microspectroscope, polariscope, etc., are found in the students laboratory for the purpose of illustrating the special features of his work. Each student is provided with a locker and has in his outfit glassware and special reagents, a Leitz dissecting microscope, a Leitz microscope with stand I, four oculars and four objectives, including a 1-12 immersion. The laboratory is provided with a large paraffin oven divided into compartments for the use of the students. In conjunction with the department of pathology the anatomical laboratory has outfitted a combined projection and dark room with all the appliances necessary for microscopic and ordinary photography. Its equipment consists of a Zeiss projection apparatus, Zeiss camera with complete series of lenses, large portrait camera with Zeiss planar attachment and a special copying camera with a five-foot draw. The Edinger projection apparatus with photographic attachment is also used in this work.

Special attention has been paid in the equipping of the laboratories with the facilities for research and original investigation. Complete outfits of reagents, glassware, microscopes, apparatus for wax reconstructions, have been installed. A whole brain Jung microtome in possession of the department of pathology is available for work in neurology. Five private rooms have been outfitted for the staff and advanced students. A large preparation room is in charge of the technical assistant where all of the apparatus and reagents necessary for microscopic work are kept constantly on hand. This is also meant to accomodate students who are at work on special problems. Animals for experimental purposes are kept in a separate building which contains a well equipped operating room. This is used by the departments of surgery, pathology and anatomy in common.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system by which a certain amount of selection is allowed in the regular work of the department.

#### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differen-

tiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: 1. For the purpose of orientation, the consideration of their macroscopic appearances, relations and physiology. 2. The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. 3. The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student has a typical set of comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize him with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the processes of fixation, embedding in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with laboratory drawings and contain an epitome of the student's notes and collateral reading.

**1. Histology.—DR. HARDESTY.**

In this course the anatomy of the cell, its variations in form, the conditions and processes of its proliferation and the modifications which result in its differentiation into a cell of specialized type is considered. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body as they are composed of cells and cell products and derived from one or the other of the germ layers. The study is always comparative. *First year, 3 laboratory periods, 3 lectures per week, 12 weeks. 3½ units.*

**2. Microscopic Organology.—DR. HARDESTY.**

The organs are discussed with reference to the form, arrangement, and number of the fundamental tissues composing them with special reference to the structural and functional relations to other organs. In each case the student begins first with the tissue in situ and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

*First year, 3 laboratory periods, 3 lectures per week, 12 weeks. 3½ units.*

**3. Neurology.**—DR. HARDESTY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with the view to tracing the origin, development and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system. *3 lectures, 3 laboratory periods per week, 12 weeks. 3½ units.*

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**SYSTEMATIC HUMAN ANATOMY.**

The courses in systematic anatomy are given by practical work entirely. There are no lectures or quizzes. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin sections. In order to emphasize the importance of original work, a series of statistical investigations are being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

**4. Osteology.**—PROF. FLINT, DR. MOODY AND DR. CLEARY.

Each student is loaned a skeleton and is required to model in clay and draw each bone in the body. *First year, 6 half days per week, 6 weeks. 3 units.*

**5. Head and Neck.**—PROF. FLINT, DR. MOODY AND DR. CLEARY.

*First year, 6 half days per week, 7 weeks. 4½ units.*

**6. Arm and Thorax.**—PROF. FLINT, DR. MOODY AND DR. CLEARY.

*First year, 6 half days per week, 7 weeks. 4½ units.*

**7. Leg and Abdominal Viscera.**—PROF. FLINT, DR. MOODY AND DR. CLEARY.

*First year, 6 half days per week, 7 weeks. 4½ units.*

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In his second year the student must repeat at least two of courses 5, 6, and 7, provided they have already dissected the entire body in their first year. Research will be accepted in lieu of these courses.

**8. Organogenesis.—PROF. FLINT.**

The development of the various organs from their first appearance in the germinal layers to the conditions found in the adult body is briefly considered together with the mechanics of the development of organs, the process of growth and regeneration. *First and second years, 1 lecture and demonstration per week. 2 units.*

**9. Special Anatomy for Physicians and Advanced Students.—PROF. FLINT AND DR. MOODY.**

This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis and abdominal viscera. The work is largely independent. A limited number of regular students will be permitted to take this course as an elective after finishing the required work of the department. *Hours arranged to suit applicants. 4-8 units.*

**10. Research.—PROF. FLINT AND DR. HARDESTY.**

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. A certain number of units in Course 10 will be accepted in lieu of the required systematic anatomy of the second year from students who have shown marked ability in their work.

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## PHYSIOLOGY.

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The courses in physiology are given during the first and second years. The instruction consists in lectures and recitations on general and special physiology, laboratory work in chemical physiology, and in nervous and physical physiology.

**1. Lectures and Recitations in General Physiology.**

These lectures are given to the students of the first and second year classes. They present the general aspects of physiology as

a biological science, the physico-chemical foundations of function, and the relations of function to structure. The lectures are supplemented by demonstrations and illustrations. *3 hours per week throughout the first year. 6 units. 3 hours per week throughout 27 weeks of the second year. 4½ units.*

## 2. Chemical Physiology.

The laboratories in chemical physiology are well equipped, the students have individual desks, and are supplied with individual sets of reagents and apparatus. There are hoods for digestions, distillations and dessications. The balance room contains eight balances of the latest designs of Sartorius and Staudinger, a spectroscope, polariscope, refractometer, a large gas-pump and a dozen microscopes. It is the aim of the course to elucidate the chemical aspects of physiology to the end of general physiological knowledge, rather than of specialized chemical training. The student is sufficiently trained in technique to enable him to carry through the various procedures in analysis, but the point of view is that of physiology. All work is practical and individual. The course is given during the last period of the first year.

As announced in the new requirements for admission to the Medical Department, it is the intention to relegate to the premedical collegiate years all instruction in pure chemistry. Until these requirements shall have become operative, the course in chemical physiology is preceded by a brief course in organic chemistry for the benefit of those students who have not received adequate instruction therein.

The course consists of:

(a) A study of the carbohydrates. The starches, primary and secondary sugars are systematically taken up, and their relations to digestion and nutrition expounded.

(b) A study of the fatty acids, fats and adipose tissues. The physical and chemical relations of the fats are defined, and their relations to digestion, nutrition and metabolism elucidated.

(c) A study of the proteins, their derivatives, antecedents and constituent groups. The particular proteins are exhaustively studied, and particular stress is laid upon the formation of proteins in the synthetic work of the animal and vegetable body, their reduction in the course of digestive and bacteriological enzymic action, and their re-organization in the process of nutrition. The proteins in the body—of the muscle, fibrous tissue, cartilage, tendons, reticulum, thyroid body and the glands—are studied seriatim.



Following this the individual systems and tissues of the body are studied. These include: The blood and the lymphatic system, the bones, the glands of the body, the skin, the hair, the liver, the bile, the nervous system, the organs of digestion and the processes of digestion, absorption and assimilation, and the feces. The most important of these are studied by the entire class, the others in sections. Particular attention is paid to the urine which is studied from the physiological point of view in the most exhaustive manner, and especially in the attempt to secure for the students a clear conception of the katabolic processes of metabolism. All of the organic and inorganic constituents of normal urine are analysed.

It is the aim of the department that this course shall supplement and form the counterpart to the course in general physiology. Regular conferences are held in connection with the course. Students showing proficiency are encouraged to elect further work in chemical physiology and so soon as they are independent will be placed on research upon some topic connected with the subject.

Following the course in chemical physiology a brief course in toxicology is given. In this course the students are taught the identification and micro-chemical study of some of the organic and inorganic poisons. This course includes instruction in the recognized methods of toxicological research and is entirely practical in nature. *5 days per week, 9 weeks. 3½ units.*

### **3. Laboratory Course in General Physiology.**

This course is given at the beginning of the second year. The laboratory is well equipped with new instruments of latest design including Ludwig's continuous tracing kymograph, 12 spring kymographs and accessories, Bowditch interrupting clock, electro magnetic chronographs, electrically maintained tetanus springs and turning forks, 12 DuBois Raymond induction coils, DuBois Raymond keys, moist chambers, muscle levers, spring and pendulum myographs, mechanical tetanometer, galvanometer, arterial schemes, mercurial, spring and membrane manometers, oncometers, sphygmographs, cardiographs, stethographs, Marcy's tambours, spirometer, reaction time chronograph, eye and ear models, phakoscope, Kuhne's artificial eye. Here the students perform experiments and measurements in the physiology of nerve and muscle, circulation and respiration, vision, audition and locomotion. The fundamental facts of physiological psychology are also demonstrated. *4 days per week, 9 weeks. 2½ units.*

**PATHOLOGY.**

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.  
H. A. L. RYFKOGEL, M.D., Instructor in Pathology.

Instruction in pathology is given in the Hearst Laboratory of Pathology during the second year, and at the City and County Hospital during the fourth year. The courses consist entirely of laboratory work; formal didactic teaching is not employed. The instruction consists of individual work upon the part of the student, supplemented by such demonstrations and discussions as are considered necessary to fix and amplify the knowledge gained in first-hand study. The inductions, the theoretical and practical relations and the numerous general considerations in pathology are brought into the course in the form of short discussions, introduced in moments which are opportune by virtue of the particular practical work in hand. It is believed that this correlation of general pathology to concrete laboratory work is more effective than a didactic course, and more rapidly develops the scientific independence of the student. Since adequate equipment is a *conditio sine qua non* of rapid and sustained work, the students' laboratories have been elaborately equipped with the best instruments and apparatus of latest design. It is the principle of instruction in this department to bring the student into a contemplation of pathology from the biological point of view, since only from this standpoint can the scope and dignity of the science and its relations to hygiene and preventative medicine be adequately understood and valued. Properly studied, pathology forms the substratum of clinical medicine, and many of the manipulations employed in pathological studies are indispensable to the practice of medicine. A knowledge of pathology not only endows the student with conceptions of the nature of disease, but also trains in the diagnosis of disease.

1. **Morphological Pathology.**—PROF. TAYLOR AND ———

The laboratory is equipped with new microscopes—the latest model of Leitz, stand I, rack and pinion centering stage, revolver with four objectives, objectives 1, 3, 5, and 1-12 oil immersion and oculars 0, I, III and IV—Greenough binocular and Nebelthau microscopes for the study of inflammation and of large sections; ten microtomes; and a large paraffin oven with reservoirs for paraffin; microspectroscopes, micropolariscopes and other special apparatus. Each student receives a microscope, apparatus for embedding and mounting, bottles for tissues and stains, one dozen

dropping bottles, and staining dishes. The gross lesions are demonstrated in the fresh state and upon Kaiserling preparations from the museum. The students fix, harden, embed, cut and stain their sections until the particular varieties of technique employed in pathological work are firmly acquired. For the remainder of the material, blocks are given out for sectioning or cut sections distributed.

The course includes instruction upon the chief organs and tissues in the order of their importance. It is realized that the entire subject can not be covered, and in lieu of such an attempt the principal lesions of the more important organs and tissues are studied in an exhaustive manner. Throughout the course emphasis is placed upon the importance of acquiring accurate visual images of the lesions.

In the study of the lesions of disease the students are taught to found their observations upon an ultimate analysis of tissue units upon the basis of cytology and microscopic anatomy. From the results of these ultimate analysis the student will build up the groupings which constitute pathological lesions, thus avoiding all confusion of theoretical classifications and didactic schemata. In the study of etiology, the experiment is employed whenever feasible and advantageous. Inflammation, in its various phases, is studied largely from the experimental point of view. Systematic reports and original drawings are regular portions of the work. *16 hours per week, 18 weeks. 8 units.*

Prerequisite: Completion of the course in first year histology and microscopic anatomy.

## 2. **Chemical Pathology.**—PROF. TAYLOR AND ———

The laboratory is well equipped. Students have individual desks stocked with all needed apparatus and reagents. Disposed about the room are hoods containing large water baths, blast, gas generators, the stand for Kjeldahl digestions, and large desks for distillations, etc. Adjacent to the main laboratory is the balance room, containing ten Sartorius balances, individual exsiccators, a large drying oven, microscopes, spectroscopes, polariscopes and a refractometer.

In this course disease is studied from the point of view of disturbed functionation; this and the previously detailed course contrast pathological physiology with pathological anatomy. Chemical biology is daily becoming of greater importance, and upon its study depends the comprehension of the nature of many diseases and their progressions, this being particularly true of

the microörganisial infections. The course includes the chemical study of the organs and tissues of the body in various diseases, of bacterial processes, of exudates and transudates, and of the gastric contents, the feces, and the urine. *4 hours per day, 5 days per week, 9 weeks. 5 units.*

Prerequisite: Completion of the first year course in chemical physiology.

3. **Bacteriology.**—DR. RYFKOGEL.

The students use, for the microscopical work, the equipment of the laboratory of morphological pathology, which adjoins the laboratory of bacteriology. The bacteriological laboratory proper is fully equipped for the preparation of culture media, and the cultivation and study of microörganisms, each student being supplied with an individual outfit of apparatus. The first portion of the course consists in the study of microbiology. Microörganisms of many types and kinds, both saphrophytic and pathogenic, are exhaustively studied. Following this the students are instructed in the narrower domain of bacteriological pathology. The infections are studied in original lesions and by experiment, and the relations of microörganisms to general and special pathological conditions are thus elucidated. *4 hours per day, 6 days per week, 9 weeks. 6 units.*

Prerequisite: Completion of the first year course in histology and microscopic anatomy.

4. **Autopsy Course.**—PROF. TAYLOR.

During the fourth year an autopsy course is conducted in the City and County Hospital. The members of the fourth year class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students. *Two sections of 1 semester each, 4 hours per week, except in the event of absence of material. 1 unit.*

**Research Department of Hearst Pathological Laboratory.**

The private laboratories of pathology are installed with elaborate equipments for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

### THERAPEUTICS.

WASHINGTON DODGE, M.D., Professor of Therapeutics.

RICHARD M. H. BERNDT, M.D., Instructor in Therapeutics.

CHAS. LEWIS MORGAN, M.D., Lecturer in Materia Medica and Pharmacy.

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1. **Physiological Action of Drugs.**—DR. BERNDT.

The action and application of the chief remedial agents are considered. Lectures, demonstrations and recitations. *Second year, 2 hours per week, 27 weeks. 3 units.*

2. **General Therapeutics.**—PROF. DODGE.

The therapeutic indications in the various diseases are expounded, and the relations to the etiology of disease fully elucidated. Prominence is given to the hygienic and other non-medical aspects of therapeutics. Lectures. *Third year, 2 hours per week throughout the year. 4 units.*

3. **Materia Medica and Pharmacy.**—DR. MORGAN.

The course in materia medica and pharmacy having been transferred from the first to the third year, no instruction in those subjects will be given during the session of 1902-3, since the present junior class was instructed in those subjects during their first year. When the course is resumed it will be purely practical, embracing the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

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### MEDICINE.

WILLIAM WATT KERR, M.D., Professor of Clinical Medicine.

HERBERT C. MOFFITT, M.D., Professor of the Theory and Practice of Medicine.

CLARENCE QUINAN, M.D., Instructor in Medicine.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.

OSCAR NETTLETON TAYLOR, M.D., Assistant in Medicine.

GEORGE F. REINHARDT, M.D., Assistant in Medicine.

FRED. C. BURROWS, M.D., Assistant in Medicine.

CHARLES M. COOPER, M.D., Assistant in Medicine.

J. WILSON SHIELS, M.D., Assistant in Medicine.

GEORGE J. MCCHESNEY, M.D., Assistant in Medicine.

CHESTER W. WOOLSEY, M.D., Assistant in Medicine.

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Instruction in medicine is founded upon practical work based

upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the methods of diagnosis, and in the rational employment of therapeutics. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and therefore properly requires it a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the fourth year to place the students upon individual practical work.

1. (a) **Physical Diagnosis.**—DR. EBRIGHT, DR. REINHARDT AND HOSPITAL INTERNES.

This course is given in the wards of the City and County Hospital, and consists in a review of the topographical anatomy of the viscera, in systematic instruction in inspection, palpation, percussion, auscultation, and in the adjuncts to physical diagnosis. The class is divided into sections, insuring individual instruction. *Third year, 3 hours a week, 1 semester. 1 unit.*

(b) **Physical Diagnosis.**—DR. TAYLOR.

The material for the course is provided by the ambulatory course at the dispensary, and is ample and covers a wide range of conditions. *Third year, 2 hours a week, 1 semester. 1½ units.*

2. **Dispensary Clinics.**—DR. TAYLOR, DR. SHIELDS AND —

The class is divided into sections and the students are brought into direct contact with the patients. The students are systematically instructed in the taking of histories, in the general and special examinations of the sick and in treatment. *Third year, 4 hours a week throughout the year. 2½ units.*

3. **Clinics in Internal Medicine.**—PROF. KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures and demonstrations upon the abundant material in the medical ward of the City and County Hospital. Students are assigned to the beds for the study of individual cases. *3 hours a week through 2 years. 6 units.*

4. **Lectures on Medicine.**—PROF. MOFFITT.

A systematic course of lectures on internal medicine. Purely didactic teaching is subordinated to lectures illustrated and supplemented by clinical material. Whenever possible patients are brought into the lectures. Themes are assigned to individual

students, and the reports are a portion of the regular student's work. *Third and fourth years, 2 hours a week through 2 years. 8 units.*

**5. Clinics in Internal Medicine.**—PROF. MOFFITT.

Material for this course is furnished by the ambulatory clinic at the dispensary. *Third and fourth years, 1 hour per week throughout 2 years. 2 units.*

**6. Bedside Instruction.**—PROF. KERR, DRS. EBRIGHT, BURROWS, COOPER AND WOOLSEY.

The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies. *Fourth year, 2 hours per week through 1 semester. 2½ unit.*

**7. Clinical Course at the Out-Patient Department.**—PROF. MOFFITT.

The course consists of one clinic per week to one half the fourth year class, and one ward class session per week to sections of not more than six students. In this course the particular aspects of ambulatory material are thoroughly studied. *Fourth year. 5-6 unit.*

**8. Dispensary Clinics.**—DRS. QUINAN AND SHIELS.

The class is divided into sections which attend the ambulatory clinics, where they are instructed in the examinations of patients and in systematic study of internal diseases. *Fourth year, 1 hour per week. 12½ units.*

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## SURGERY.

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical Surgery.

HARRY M. SHERMAN, M.D., Professor of the Principles and Practice of Surgery.

THOMAS W. HUNTINGTON, M.D., Professor of Clinical Surgery.

GEORGE FRANKLIN SHIELS, M.D., Associate Professor of the Principles and Practice of Surgery.

J. HENRY BARBAT, M.D., Instructor in Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Surgery.  
HAROLD BRUNN, M.D., Instructor in Surgery.  
WALLACE I. TERRY, M.D., Assistant in Surgery.  
ALFRED NEWMAN, M.D., Assistant in Surgery.  
JAMES P. DUNN, M.D., Assistant in Surgery.  
MARSHALL B. RYER, M.D., Assistant in Surgery.  
JOHN J. FLOOD, M.D., Assistant in Surgery.  
C. G. LEVISON, M.D., Assistant in Surgery.  
H. B. REYNOLDS, M.D., Assistant in Surgery.  
C. M. COOPER, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years and, while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology and operative courses on the cadaver. Considerable clinical material is found in the wards of the City and County Hospital and numerous cases of minor surgery are received in the out-patient dispensary on New Montgomery street. During his last year the student is brought into contact with patients in the ward classes where he is required to follow a certain number of cases throughout their course. Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, at which papers are read and discussed under the guidance of the professor of surgery. A similar meeting is conducted for the third year class by one of the assistants.

1. **General Surgery.**—PROF. SHERMAN AND ASSOCIATE PROF. SHIELS.

The principles of general surgery are discussed in the lectures illustrated by diagrams, photographs, wet and dry specimens and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon. *Third and fourth years, 2 hours a week through 2 years. 8 units.*

2. **Clinical Surgery.**—PROF. HUNTINGTON AND ASSISTANTS.

This course includes clinics, practical demonstrations and bedside teaching in the wards and operating room of the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment and asepsis are discussed at the bedside. Especial attention is paid to the treatment of fractures and dislo-



cations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anaesthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation. *Third and fourth years, 3 hours a week through the year. 6 units.*

**3. Surgical Pathology.—DR. BRUNN.**

This course will present in a practical way the application of many of those points in the previous work in pathology, bacteriology and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of micro-organisms by means of the lymphatics through the lungs, liver and kidneys, the new formation of blood vessels and lymphatics and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical. *Third year, 2 hours a week, 9 weeks. 2 units.*

**4. Operative Surgery on the Cadaver.—DR. BARBAT.**

The classical operations in the abdomen are performed by the students of the class individually, imitating as closely as possible the arrangement and technique of the operating room. *Fourth year, 2 hours a week, 9 weeks. ½ unit.*

**5. Operative Surgery on the Cadaver.—DR. KUGELER.**

This is an extension of Course 4, in which the surgery of the extremities is studied by practical operations on the cadaver under the same technical arrangements as in Course 4. *Fourth year, 2 hours a week, 9 weeks. ½ unit.*

**6. Wound Dressing, Minor Surgery and Bandaging.—DR. TERRY.**

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course. *Third year, 3 hours a week, one-half year. 1 unit.*

**7. Ward Classes.—DRS. LEVISON, COOPER AND REYNOLDS.**

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment and subsequent care of the patient are included in this course. *Fourth year, 2 hours a week through one semester. 2½ unit.*

**8. Surgical Dispensary.—DRS. KUGELER, DUNN, LEVISON AND RYER.**

This course is given upon the ambulatory material at the Out-Patient Department and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations and carry through the treatment in large part themselves. *Third year, 2 hours, and fourth year, 3 hours a week. 1½ units.*

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**MICROSCOPICAL AND CHEMICAL DIAGNOSIS.**

—M.D.

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It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology and physiology, which are of assistance to the clinician in reaching a diagnosis. It aims to act as connecting link between the work of the preclinical and clinical years.

**1. DR. ———**

This course serves as an introduction to the students' work in practical medicine and surgery and is given almost exclusively by the laboratory method. A simple, effective, well-equipped, well-lighted laboratory accomodating one half the class is situated on the grounds of the City and County Hospital, from the wards of which material for the course is obtained. During the year routine instruction is given on the normal and pathological conditions of the blood with thorough training in the various methods of its examination, such as the examination of fresh specimens,

haemaglobin estimations and the study of dried and stained preparations. The anaemias following this and the condition of the blood in all diseases in which blood examinations tend to aid the clinician in his work are thoroughly considered. In every instance material for the class is obtained from cases in the wards. If these do not exist, specimens from the cabinet are used for purposes of instruction. Considerable time is devoted to a thorough study of the malarial blood together with a life-history of the parasites and the modes of transmission of the diseases. The examination of the urine in various diseases forms an important part of the course, and for this purpose the newer and more effective methods are used. The examination of the sputum and feces in health and disease together with a brief review of parasitology and the methods of diagnosis of parasitic diseases are taken up with practical laboratory methods.

Through the courtesy of the officials at the Presidio the secretions and excretions of patients suffering from tropical diseases can be obtained for the use of the class. Considerable emphasis will be laid on this feature of the work since the acquisition of our new insular territories has greatly increased the trade between California and the Orient, and thus renders essential the protection of the State from the introduction of various tropical diseases. This demands the thorough training of students in work of this kind.

The course concludes with a thorough analysis of the gastric secretions and contents, exudates and transudates. *Third year, sections A and B, 12 hours a week, 9 weeks. 2 units.*

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### OBSTETRICS.

———, Professor of Obstetrics.

JAMES F. MCCONE, M.D., Lecturer on Obstetrics.

Z. T. MALABY, M.D., Assistant in Obstetrics.

WM. P. HARVEY, M.D., Assistant in Obstetrics.

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The work in the department of obstetrics is given by lectures, demonstration and clinics. The special anatomy and physiology of the female pelvis and its contents are reviewed. Normal and pathological pregnancies, normal and pathological parturitions and normal and pathological puerperae are described in detail. Questions of treatment are discussed and illustrated by means of charts, manikins and specimens.

1. **General Obstetrics.**—DR. McCONE AND DR. HARVEY.  
Lectures and demonstrations. *Third year, 3 hours per week throughout the year. 6 units.*

2. **Practical Obstetrics.**—DR. McCONE AND DR. MALABY.

In this course students are allowed to examine patients normally pregnant. Complicated cases of pregnancy and parturition are shown and discussed, their diagnosis and treatments considered. During this period the students attend cases of confinement at the City and County Hospital and patients from the Out-Patient Department. As a rule each student sees six cases of labor. Clinical lecture and demonstration. *Fourth year, 1 hour per week throughout the year. 1 unit.*

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### GYNECOLOGY.

CHARLES A. VON HOFFMANN, M.D., Professor of Gynecology.

BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.

J. MORA MOSS, M.D., Assistant in Gynecology.

WILLIAM G. MOORE, M.D., Assistant in Gynecology.

Z. T. MALABY, M.D., Assistant in Gynecology.

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Instruction in gynecology is given during the fourth year. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

1. **Clinics in Gynecology.**—PROF. VON HOFFMANN AND DR. MOORE.

This course is given upon the material in the wards of the City and County Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students who are required to take their histories, conduct the physical examination and make the diagnosis. When the case so assigned is brought into the clinic or the operating room those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course, instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them. *Fourth year, 2 hours a week throughout the year. 2 units.*

**2. Lectures in Gynecology.**—DR. MACMONAGLE.

A systematic course of lectures, combined with recitations. *Fourth year, 1 hour a week through the year. 2 units.*

**3. Dispensary Clinics.**—PROF. VON HOFFMANN, DRs. MOORE, MOSS AND MALABY.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments the instruction is given in sections, and is entirely practical. *Fourth year, 18 hours for each section.  $\frac{1}{3}$  unit.*

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**ELECTIVES.**

The elective clinical branches which are offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery and orthopedic surgery. Instruction in the general aspects of the diseases of children and of the nervous system is comprised in the work of the Department of Medicine. This general work is, in the elective subjects of pediatrics and clinical neurology, supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the Department of Surgery. This general work is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature. It is the intention of the Faculty in the near future to increase the electives in the clinical as well as in the preclinical years.

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**PEDIATRICS.**

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, M.D., Assistant in Pediatrics.

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The courses in pediatrics consist of lectures, recitations, conferences and practical work in the Out-Patient Dispensary. The

dispensary, located in a densely populated section of the city, affords an extremely favorable field for the observation of the diseases peculiar to children.

1. **Lectures and Recitations.**—PROF. LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding. *Fourth year, 1 hour a week throughout the year. 2 units.*

2. **Dispensary Clinics.**—DR. BLUM.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied. *Fourth year, 2 hours a week throughout the year. 1½ units.*

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## DISEASES OF THE SKIN.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

A. B. GROSSE, M.D., Assistant in Diseases of the Skin.

ERNEST PRING, M.D., Assistant in Diseases of the Skin.

HOWARD MORROW, M.D., Assistant in Diseases of the Skin.

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1. **Diseases of the Skin.**—PROF. MONTGOMERY AND ASSISTANTS.

The instruction in the department consists in:

(a) A review of the histology and microscopic anatomy of the skin.

(b) The study of the pathology and bacteriology of the various cutaneous lesions. So far as possible the instruction in this aspect of the subject is carried parallel to the clinical study of individual cases. In the event of the absence of direct clinical material bearing upon any particular disease, this plan is supplemented by the demonstration and examination of museum specimens and collected tissues.

(c) Practical work in the dermatological clinic. Instruction is founded upon the anatomy and pathology, as elucidated in the previous sections. The work is purely practical and individual; no didactic teaching is included. *Fourth year, 2 hours a week through the year. 2 units.*

**CLINICAL NEUROLOGY.**

LEO NEWMARK, M.D., Professor of Clinical Neurology.

J. WILSON SHIELDS, M.D., Assistant in Clinical Neurology.

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The course of instruction in diseases of the nervous system comprises lectures, clinics, demonstrations and practical work. It is the plan of the department to introduce students into the specialized work in nervous diseases.

1. **Clinic in Neurology.**—PROF. NEWMARK.

The work in this course is entirely practical and covers the exhibition of selected dispensary cases and the training of students in the methods of conducting physical examinations on neurological cases and in testing the reactions of degeneration, sense, and perception. Patients suffering from various diseases of the nervous system are shown, questions of diagnosis and prognosis considered, followed by a discussion of the pathological lesions shown by these patients. These discussions are illustrated by numerous pathological specimens prepared by the newer neurological methods. *Fourth year, 1 hour per week throughout the year. 1 unit.*

2. **Out-Patient Dispensary.**—DR. SHIELDS.

The material for this course is abundant in quantity and covers a wide range of conditions illustrating the various phases of ambulatory nervous cases. The work is entirely practical, consisting in the examination of patients and in the observation of the progress of disease and the results of treatment. *Fourth year, 12 hours per week throughout ½ year. ⅓ unit.*

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**DEPARTMENT OF OPHTHALMOLOGY.**

GEORGE HERMAN POWERS, M.D., Professor of Ophthalmology.

GEORGE W. MERRITT, M.D., Assistant in Ophthalmology.

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Instruction in ophthalmology is given at the City and County Hospital and at the Out-patient Dispensary. Operative cases are shown at the hospital, while valuable material for diagnosis and treatment is obtained from the ambulatory cases at the dispensary.

1. **Ophthalmology.**—PROF. POWERS AND DR. MERRITT.

In this course the pathology, diagnosis and treatment of the diseases of the eye are covered by means of lectures and practical work. *Fourth year, 3 hours a week throughout the year, 1 lecture, 2 hours practical work per week. 3½ units.*

**OTOLOGY, RHINOLOGY AND LARYNGOLOGY.**

WILLIAM EVELYN HOPKINS, M.D., Professor of Otology.

GARDNER PERRY POND, M.D., Assistant in Otology.

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Instruction in otology, rhinology and laryngology is given at the City and County Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated at the clinic at the City and County Hospital.

**1. Otology, Rhinology and Laryngology.**—PROF. HOPKINS.

Clinic and dispensary course. *Fourth year, 3 hours a week throughout the year, 1 hour clinic, 2 hours practical work ½ year. 1½ units.*

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**DEPARTMENT OF GENITO-URINARY SURGERY.**

JOHN MARSHALL WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

JOHN C. SPENCER, M.D., Assistant in Genito-Urinary Surgery.

CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.

E. L. WEMPLE, JR., M.D., Assistant in Genito-Urinary Surgery.

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Instruction in genito-urinary surgery is given at the Out-Patient Department and in the wards of the City and County Hospital. In the Out-Patient Department a large number of cases illustrating the various diseases of the genito-urinary tract pass under the observation of the class. Students are thoroughly drilled in the methods of diagnosis and the operative procedures required in the treatment of this class of patients. Selected cases of a graver nature are shown in the wards of the City and County Hospital where their treatment will be carefully noted.

**1. Genito-Urinary Surgery.**—PROFESSOR WILLIAMSON AND ASSISTANTS.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. A weekly clinic is also held in the wards of the City and County Hospital. *4 hours a week throughout the year, 1 clinic per week, 3 hours practical work. 3 units.*

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**ORTHOPEDIC SURGERY.**

———, Professor of Orthopedic Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

JOHN J. FLOOD, M.D., Assistant in Orthopedic Surgery.

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This course is entirely practical and is given at the Out-Patient Department on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces. *Fourth year, 3 hours a week throughout the year. 2 units.*

### SUMMER COURSES.

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In case there is a sufficient number of applicants a limited number of special courses will be given in the months following the close of the spring semester. Application must be made not later than March 15th. Courses begin April 1st.

The tuition for each of these courses is \$50. In addition a charge will be made for actual material consumed.

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### DEPARTMENT OF ANATOMY. For the Session of 1902-03.

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1. **Anatomical and Histological Technique.**—PROF. FLINT AND MR. MILLER.

It will be the aim of this course to give the student a general idea of all the common and many of the finer methods of anatomical and histological technique. Killing, fixation, hardening, sectioning and staining are taken up in detail. The work is nearly all practical and the student must prepare tissues by various methods. Practical work in injecting, preservation of material, corrosions, digestions, etc., is given. Occasional lectures on the principles involved in this work are held.

2. **Histology, Microscopic Organology and Neurology.**—DR. HARDESTY.

This course covers briefly the microscopic features of the simple tissues, the organs and the nervous system. Applicants who so desire may emphasize one feature of the work more than another. A comprehensive series of sections will be prepared for the student so that the maximum amount of time may be spent in the study of the tissues.

3. **Systematic Human Anatomy.**—DR. MOODY.

(a) Osteology.

(b) Head and neck.

(c) Arm and thoracic viscera.

(d) Leg and abdominal viscera.

This work is entirely practical and consists of dissections carried on under the direction of the instructor. Topographical and

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embryological points are emphasized as they arise. Only one of subdivisions a, b, c or d, can be taken in the six weeks allotted for this course.

4. **Special Anatomy for Physicians.**—PROF. FLINT.

The object of this course is to give an opportunity for physicians and others who desire to become familiar with the finer anatomical relations of special regions of the body, as for example, eye, ear, thoracic, abdominal or pelvic viscera. The work is intended especially for those who contemplate work in the special fields of medicine and surgery or for those who wish to familiarize themselves with the main points of topographical anatomy.

5. **Research.**—PROF. FLINT AND DR. HARDESTY.

The laboratory will be open during the summer. A limited number of suitably trained individuals can work upon original problems in anatomy under the direction of the instructors in charge.

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## DEPARTMENT OF PATHOLOGY.

1. **Special Pathology.**—PROF. TAYLOR.

A course in special branches of pathology for advanced students. A good knowledge of general pathology and experience in pathological work are a prerequisite.

2. **Chemical Pathology.**—PROF. TAYLOR.

This course contemplates the study of the chemistry of pathological processes. For this course an adequate knowledge of chemical physiology and technical experience are a prerequisite.

3. **Bacteriology.**—DR. RYFKOGEL.

Instruction in this course is from the standpoint of general pathology and clinical medicine, the aim being to explain the general relation of the science, to illustrate the etiological relations of disease, and to equip the student and practitioner with the bacteriological procedures of diagnosis now established as necessary adjuncts to clinical medicine.

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## DEPARTMENT OF PHYSIOLOGY.

1. **Laboratory Work in Physiology.**

A course in the laboratory devoted mainly to muscle-nerve physiology and the physiology of respiration and circulation. The main purpose of the course is to explain the methods of physiological experimentation.

## GRADUATES, 1902.

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Benjamin Bakewell, B.S. ....	Oakland
William Baumgarten, Ph.G. ....	Tehama
Philip August Bill. ....	San Francisco
William Charles Chilson ....	Fallbrook
Henry David Panning, A.B. ....	San Francisco
Ernest Charles Foster ....	Oakland
Frank Revere Henderson ....	Merced
George Hippolyte Juilly, B.S. ....	San Francisco
Ostroilo Stanislaus Kucich ....	San Francisco
Adelebert Watts Lee ....	Carson City, Nevada
Pascal Arthur Lensman, A.B. ....	Königsberg, Prussia
Arthur Thomas McGinty ....	San Francisco
John Harry Mallery ....	San Francisco
Joseph Frank Meagher, A.B. ....	San Francisco
Caroline Stow Merwin ....	Oakland
John Crockett Newton ....	Berkeley
Joseph Martin O'Donnell, A.B. ....	Hollister
Harry Elwin Piper ....	Santa Cruz
James Fowler Pressley ....	Santa Rosa
Frederick Henry Tebbe ....	Yreka
Edward Topham. ....	Milpitas
Blanche Coralie Van Heusen ....	Sacramento
Walter Joseph Marie Williams, A.B. ....	San Francisco
Fredrick H. Zumwalt, Ph.G. ....	San Francisco

# **MATRICULATES.** **1901-2.**

## **FOURTH YEAR CLASS.**

Benjamin Bakewell, B.S. (University of California) .....	Oakland
Josephine Eugenia Barbat, Ph.G. (University of California) ..	S. F.
William Baumgarten, Ph.G. (University of California) ...	Tehama
Philip August Bill .....	San Francisco
David William Brown .....	Clements
Emma Buckley .....	San Jose
William Charles Chilson .....	Fallbrook
James Warren Conlin .....	San Francisco
Marguerite Deininger .....	San Francisco
John Gapen Donaldson, Ph.G. (University of California) ..	Princeton
Henry David Fanning, A.B. (St. Ignatius College) ..	San Francisco
Ernest Charles Foster .....	Oakland
Charles Denis Raymond Gleason .....	San Leandro
Frank Revere Henderson .....	Merced
Madeline E. Johns .....	San Francisco
George Hippolyte Juilly, B.S. (Lycée Voltaire, Paris) .....	S. F.
Daniel William Kamp .....	Petaluma
Ostroilo Stanislaus Kucich .....	San Francisco
Adelebert Watts Lee .....	Carson City, Nevada
John Herbert Leimbach .....	Sacramento
Birney Alexander Lendrum .....	San Jose
Pascal Arthur Lensman, A.B. (Calvin College Institut Strasse) .....	Konigsberg, Prussia
Rudolph Ignatius Longabach .....	San Francisco
Ergo Alexander Majors .....	Butte, Montana
John Harry Mallery .....	San Francisco
William Garrett McGuire .....	San Francisco
*William Joseph McKinley .....	Forest Hill
Arthur Thomas McGinty .....	San Francisco
Thomas Reid McNab .....	Fillmore
Joseph Frank Meagher, A.B. (St. Ignatius College) ..	San Francisco
Caroline Stow Merwin .....	Oakland

\*Deceased.

Dan Hazen Moulton .....	Oakland
John Crockett Newton, Ph.G. (University of California) .....	S. F.
Joseph Martin O'Donnell, A.B. (St. Mary's College) .....	Hollister
Harry Elwin Piper .....	Santa Cruz
George Herman Powers, Jr., A.B. (University of California) .....	S. F.
James Fowler Pressley .....	Santa Rosa
Frank L. Putman .....	San Francisco
Thomas D'Arcy McGee Quinn .....	San Francisco
Fred Henry Tebbe .....	Yreka
Edward Topham, Jr. ....	Milpitas
Blanche Coralie Van Heusen .....	Sacramento
William John Walsh, B.S. (St. Mary's College) .....	San Francisco
Sydney Vattel West, B.S. (University of California) .....	S. F.
Walter Joseph Marie Williams, A.B. (St. Ignatius College) ..	S. F.
Fredrick H. Zumnwalt, Ph.G. (University of California) .....	S. F.

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### THIRD YEAR CLASS.

Adolph Baer, B.L., B.S., D.D.S. (University of California) .....	S. F.
Paul Edward Biber, A.B. (Leland Stanford Jr. University) .....	S. F.
René Bine .....	San Francisco
Louis Isidor Breitstein .....	San Francisco
George De Witt Culver .....	San Francisco
Palmer Howard Dunbar, D.D.S. (University of California) .....	S. F.
‡Mary Charlotte Faas .....	San Francisco
James Alexander Ellis .....	Alameda
Frank Robert Girard .....	Oakland
Robert Hilliard Goodale .....	San Pablo
Henrietta Hagan .....	San Francisco
James Kiah Hamilton, Jr. ....	Alameda
Howard Gilman Hill, A.B. (Leland Stanford Jr. Univ.) .....	Redlands
James Raymond Hurley .....	San Bernardino
Joseph James Kavanagh .....	San Francisco
Henry Hymen Lissner .....	Oakland
Aloysius John McKinnon .....	San Francisco
Charles Lemon McKown .....	San Francisco
Welly Daniel Miner .....	San Francisco
Pernier Albert Mix .....	Berkeley
Viola Ruth Olcovich, A.B. (Leland Stanford Jr. Univ.) .....	San Salvador, Central America
Robert Galihier Reynolds, Jr., A.B. (Shurtleff College, Upper Alton, Ill.) .....	San Francisco

‡Not in regular attendance.

Harry Philip Roberts .....	San Francisco
Carrie Rosenberg .....	San Francisco
Walter Scott Rutherford .....	Oakland
David Emmet Stafford .....	Redwood City
Earle Almeron Stone, B.L. (University of California) ....	Oakland
‡Lee Walter Teaby .....	Geyserville
Herbert Fred True .....	Los Angeles
Clarence Alfred Wills .....	Centerville

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### SECOND YEAR CLASS.

Morgan Dillon Baker, Jr. ....	San Jose
Maurice Lowell Baum .....	Livermore
Edward Emery Baumeister, Ph.G. (Univ. of California) ....	S. F.
Edith Sara Brownsill, B.L. (University of California) ....	Alameda
Eugene George Campana .....	Butte, Montana
Paul Castelhun, B.S. (University of California) ...	San Francisco
John Nolan Chain .....	San Francisco
William Zabriskie Dahl .....	Suisun
David Albert Ewing .....	Seattle, Washington
Arthur Wellesley Foshay, A.B. (Albany Coll.) ...	Albany, Oregon
George Asa Harker .....	Eastland
Morton Edwin Hart .....	San Francisco
Robert Hector, Jr. ....	Loomis
Foster Melanchthon Hoag .....	Booneville
Louis Clive Jacobs, Ph.G. (Univ. of California) ...	San Francisco
Fred Kitzing .....	Halle, Germany
Henning Koford .....	East Berkeley
Louise Adra Linscott, B.L. (University of California) ...	Berkeley
Clarke Loring McClish, B.S. (Univ. of the Pacific) ...	College Park
William Augustus Newbold .....	San Francisco
Robert Julian Nicholls .....	Berkeley
Stuart Zeno Peoples .....	Petaluma
Oscar Charles Reeve .....	Berkeley
John Peter Sandholdt .....	Watsonville
Jacob Schwarz .....	San Francisco
John Francis Slavich .....	Oakland
Eugene Kneeland Smith .....	Grass Valley
Fred Hugh Van Tassell .....	Glendora
‡Victor John Vecki .....	San Francisco
Wilhelm Waldeyer .....	San Francisco

‡Not in regular attendance.

Henry Claud Warren .....	San Francisco
George Augustus Wood .....	Astoria, Oregon

## FIRST YEAR CLASS.

Marcus Abrams .....	San Francisco
George Cummings Albee, B.S. (Beloit College).....	Berkeley
Edgar William Alexander, B.S. (Univ. of California) ....	Oakland
Coniah Leigh Bigelow, B.S. (Univ. of California)....	San Francisco
James Clark Blair, A.B. (University of California) ..	San Francisco
Albert Bonilla, A.B. (Liceo de Costa Rica National Institute) ..	S. F.
Constantine Raphael Bricca, A.B. (St. Ignatius College) ....	S. F.
George A. Briggs .....	Elk Grove
Lewis Eugene Carpenter, B.S. (Univ. of California) ..	San Francisco
William Franklin Cothran .....	San Jose
Ambrose Franklin Cowden .....	Forest Hill
Antonio Menotti dal Piaz .....	Berkeley
Mary Tom De Haven .....	San Francisco
Cornelius Thomas Devine, A.B. (Santa Clara Coll.) ....	Edgewood
Alexander Vincent Doran .....	San Francisco
†Will Cunningham Duncan .....	San Francisco
†George Louis Edelmann, Ph.G. (Univ. of California) ..	Petaluma
†Josephine Julia Gil .....	Oakland
Anna Maria Gutzwiller .....	St. Helena
Samuel Percy Hardy .....	Oakland
Harriette Buttler Harker, A.B. (Vassar College).....	Mill Valley
Herman Verplanck Hoffman, A.B. (Santa Clara Coll.) ....	San Jose
†Allan Pettit Hughes .....	Oakland
William Kenny .....	Sespe
†George Joseph Kohn .....	San Francisco
Herman Kronenberg, Ph.G. (Univ. of California) ..	San Francisco
†Herbert Nelson Lindsay .....	Port Townsend, Washington
†Jee Shin Fwe Pond Moar .....	San Francisco
†James Ignatius O'Dea, A.B. (St. Mary's College) ..	San Francisco
John William Peck .....	Oakland
Louis Xavier Ryan, A.B. (St. Ignatius College) ...	San Francisco
Le Roy Hallowell Saxe .....	Philadelphia, Pa.
Leo Lloyd Sexton .....	Fern Hill, Washington
George Samuel Snyder .....	San Francisco
Gifford Lyne Sobey, A.B. (Leland Stanford Jr. University) ..	S. F.
†Gustave Herman Taubles .....	San Francisco
†Marion Lawrence Tobriner, D.D.S. (Univ. of California) ....	S. F.

†Not in regular attendance.



Eldridge Curtis Turner .....	Sacramento
John Irving Vickerson .....	Lodi
†Elthea Wray Wade .....	San Francisco
†Alfred Vincent Wepfer .....	San Francisco
†Harry Isaac Wiel, A.B. (Leland Stanford Jr. University) ...	S. F.
†John Alexander Young, B.S. (St. Mary's College) ..	San Francisco

†Not in regular attendance.

#### HOSPITAL APPOINTMENTS—FROM CLASS OF 1902.

CITY AND COUNTY HOSPITAL (San Francisco) University of California Wards—Philip A. Bill, Frank R. Henderson, Ostroilo S. Kucich, Walter J. M. Williams, Fredrick H. Zumwalt. Polyclinic Ward—Henry D. Fanning.

ST. LUKE'S HOSPITAL.—Benjamin Bakewell, William C. Chil-son, James F. Pressley.

U. S. MARINE HOSPITAL.—Joseph F. Meagher.

FRENCH HOSPITAL.—Ernest C. Foster, George H. Juilly.

PACIFIC HOSPITAL.—J. Harry Mallery.

MT. ZION HOSPITAL.—Pascal A. Lensman, Harry E. Piper.

CHILDREN'S HOSPITAL.—Caroline S. Merwin, Blanche C. Van Heusen.

UNIVERSITY OF CALIFORNIA

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ANNUAL ANNOUNCEMENT

OF

COURSES OF INSTRUCTION

IN THE

MEDICAL DEPARTMENT

For the Academic Year 1903-1904

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SACRAMENTO:

W. W. SHANNON, : : : : SUPT. OF STATE PRINTING  
1903

Letters of Inquiry concerning the Medical Department should be addressed to Dr. A. A. D'ANCONA, Dean, Medical Department, University of California, San Francisco, Cal.

## CALENDAR.

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1903.

- Aug. 7, Friday ..... Academic year in the Medical and Academic Departments begins.
- Aug. 7, Friday }  
 Aug. 11, Tuesday } ..... Entrance examinations at Berkeley for the Medical and Academic Departments.
- Aug. 10, Monday }  
 Aug. 15, Saturday } ..... Examination of conditioned students of advanced classes.
- Aug. 13, Thursday } 10 A. M. to 2 P. M. At Medical Department.  
 Aug. 14, Friday } ..... Applications for admission to the Medical Department; filing of credentials from accredited high schools and colleges; registration of students of all the classes of the Medical Department; payment of fees.
- Aug. 17, Monday ..... Class work begins.
- Aug. 19, Wednesday ..... 11 A. M. Opening exercises.
- Sept. 9, Wednesday ..... Admission Day—a holiday.
- Nov. 26, Thursday ..... Thanksgiving Day—a holiday.
- Dec. 21, Monday ..... Christmas vacation begins.

1904.

- Jan. 4, Monday ..... Second term begins.
- March 23, Wednesday ..... Charter Day—a holiday.
- April 1, Friday ..... Summer course in histology, anatomy, physiology, pathology, and bacteriology for graduates and advanced students.
- May 2, Monday ..... Examinations begin.
- May 14, Saturday ..... Term ends.

# REGENTS OF THE UNIVERSITY.

## EX-OFFICIO REGENTS.

HIS EXCELLENCY GEORGE C. PARDEE, - - - - -	Sacramento
<i>Governor, ex-officio President of the Regents.</i>	
HIS HONOR ALDEN ANDERSON, - - - - -	Suisun
<i>Lieutenant-Governor.</i>	
HON. ARTHUR G. FISK, - - - - -	San Francisco
<i>Speaker of the Assembly.</i>	
HON. THOMAS J. KIRK, - - - - -	Sacramento
<i>State Superintendent of Public Instruction.</i>	
BENJAMIN RUSH, - - - - -	Suisun
<i>President of the State Agricultural Society.</i>	
R. J. TAUSSIG, - - - - -	26 Main St., San Francisco
<i>President of the Mechanics' Institute.</i>	
BENJAMIN IDE WHEELER, Ph.D., LL.D., 1820 Scenic Ave., Berkeley	
<i>President of the University.</i>	

## APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

Name.	Address.	*Term Expires.
ISAIAS WILLIAM HELLMAN, Esq., -	Nevada Nat'l Bank, S. F.,	1918
CHESTER ROWELL, M.D., - - -	Fresno - - - - -	1910
HON. JAMES A. WAYMIRE, - - -	Alameda - - - - -	1908
HON. CHARLES WILLIAM SLACK, } PH.B., LL.B., }	309 Montgomery St, S. F.,	1910
JACOB BERT REINSTEIN, M.A., -	217 Sansome St., S. F., -	1912
JOHN ELIOT BUDD, A.B., - - -	Stockton, - - - - -	1916
MRS. PHOEBE A. HEARST, - - -	Pleasanton, - - - - -	1914
ARTHUR W. FOSTER, Esq., - - -	Mutual Life Bldg., S. F.,	1916
C. N. ELLINWOOD, M.D., - - -	2739 Pacific Avenue, S. F.,	1908
GARRETT McENERNEY, LL.B., - -	Nevada Block, S. F., - -	1904
CHARLES STETSON WHEELER, A.B.,	532 Market St., S. F., - -	1906
GUY C. EARL, A.B., - - - - -	10 McClure St, Oakland,	1918
HON. JAMES WILFRED MCKINLEY, } B.S., }	Los Angeles - - - - -	1906
REV. PETER CHRISTOPHER YORKE, } S. T. L. }	1267 Sixteenth Ave., Oakland,	1912
JOHN ALEXANDER BRITTON, Esq., -	632 Walsworth Av, Oakl'd,	1914
FREDERICK WM. DOHRMANN, Esq.,	124 Sutter St., S. F., - -	1904

\*Terms of Regents expire March 1.

## FACULTY.

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BENJAMIN IDE WHEELER LL.D., Ph.D., President of the University,  
ex-officio President of the Faculty.

ARNOLD A. D'ANCONA, A.B., M.D., Dean.

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and  
Operative Surgery.

GEORGE H. POWERS, A.M., M.D., Professor of Ophthalmology.

WM. WATT KERR, A.M., M.B., C.M., Professor of Clinical Medicine.

DOUGLASS W. MONTGOMERY, M.D., Professor of Dermatology.

JOHN M. WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and  
Practice of Surgery.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

CHAS. A. VON HOFFMANN, M.D., Professor of Gynecology.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and  
Practice of Medicine.

JOSEPH MARSHALL FLINT, B.S., A.M., M.D., Professor of Anatomy.

WM. B. LEWITT, M.D., Professor of Pediatrics.

JACQUES LOEB, M.D., Professor of Physiology.

THOS. W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

FRANK T. GREEN, Ph.G., Associate Professor of Physiological  
Chemistry.

GEO. F. SHIELDS, M.D., F.R.C.S.E., etc., Associate Professor of the  
Principles and Practice of Surgery.

MARTIN H. FISCHER, M.D., Assistant Professor of Physiology.

BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.

CHARLES L. MORGAN, A.B., Ph.G., M.D., Lecturer on Materia Medica.

IRVING HARDESTY, A.B., Ph.D., Instructor in Anatomy.

J. HENRY BARBAT, Ph.G., M.D., Instructor in Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

RICHARD M. H. BERNDT, M.D., Instructor in Therapeutics.

HENRY A. L. RYFKOGEL, M.D., Instructor in Pathology.

HAROLD BRUNN, M.D., Instructor in Surgery.

CLARENCE QUINAN, M.D., Instructor in Medicine.

GEORGE E. EBBRIGHT, M.D., Instructor in Medicine.

WALLACE I. TERRY, M.D., Instructor in Surgery.

PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.

ALFRED B. SPALDING, M.D., Instructor in Obstetrics.

ALBERT B. McKEE, Ph.M., M.D., Instructor in Diseases of Ear, Nose, and Throat.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

ROBERT ORTON MOODY, B.S., M.D., Assistant in Anatomy.

FRED GRANT BURROWS, A.M., M.D., Assistant in Medicine.

GEO. F. REINHARDT, B.S., M.D., Assistant in Medicine.

CHAS. M. COOPER, M.R.C.S. Eng., Assistant in Medicine.

ALFRED NEWMAN, A.B., M.D., Assistant in Surgery.

JAMES P. DUNN, M.D., Assistant in Surgery.

CHAS. G. LEVISON, M.D., Assistant in Surgery.

JOHN C. SPENCER, M.D., Assistant in Genito-Urinary Surgery.

CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.

GEORGE H. RICHARDSON, M.D., Assistant in Genito Urinary Surgery.

GEORGE W. MERRITT, M.D., Assistant in Ophthalmology.

GARDNER P. POND, M.D., Assistant in Otology, Laryngology, and Rhinology.

Z. T. MALABY, M.D., Assistant in Obstetrics.

ALFRED B. GROSSE, M.D., Assistant in Dermatology.

HOWARD MORROW, M.D., Assistant in Dermatology.

SANFORD BLUM, A.B., M.D., Assistant in Pediatrics.

JOHN BRUCE MACCALLUM, A.B., M.D., Assistant in Physiology.

GEORGE BULLOT, M.D., Assistant in Physiology.

WILLIAM P. HARVEY, Assistant in Obstetrics.

CHESTER H. WOOLSEY, B.S., M.D., Assistant in Medicine.

LEWIS S. MACE, A.B., M.D., Assistant in Surgery.

TRACY G. RUSSELL, A.B., M.D., Assistant in Surgery.

WILLIAM G. MOORE, M.D., Assistant in Gynecology.

E. L. WEMPLE, JR., M.D., Assistant in Genito-Urinary Surgery.

CARL S. G. NAGEL, M.D., Assistant in Ophthalmology.

JAMES T. WATKINS, M.D., Assistant in Surgery.

H. B. REYNOLDS, M.D., Assistant in Surgery.

HAROLD JOHNSON, M.D., Assistant in Surgery.

ARTHUR L. FISHER, M.D., Assistant in Surgery.

HERBERT ALLEN, A.B., M.D., Assistant in Clinical Pathology.

ANNA M. FLYNN, M.D., Assistant in Ophthalmology.

## LOCATION.

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The Medical Department is located in the western part of San Francisco, at Second and Parnassus Avenues, south of Golden Gate Park. The main building has a frontage of 148 and a depth of 208 feet. Upon the ground floor are the students' lockers, the photographic and projection rooms, the anatomical preparation room, the laboratory of materia medica, storage rooms, janitor's quarters, and lavatories. Situated upon the second floor are the offices of administration, the library, the students' room, the laboratory of physiology, the laboratory of chemical pathology, and the private laboratories of pathology. The laboratories of chemical physiology, histology, morphological pathology and bacteriology, and a lecture room are upon the third floor, while the fourth contains eight dissecting rooms, the bone room, the anatomical museum and model collection, the private laboratories of anatomy and a lecture room.

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## ADMISSION.

Students wishing to matriculate are required to undergo examinations for admission, with the following exceptions, viz.:

1. Applicants who present certificates of having successfully passed the examination for admission to the College of Letters or the Colleges of Science of the University of California, or some other recognized University or College.

2. Applicants who present diplomas or certificates of graduation from the University of California, or of some other recognized University or College.

3. Applicants who present diplomas or certificates of graduation from accredited High Schools and Academies.

4. Applicants who present diplomas or certificates of graduation from a State Normal School of California, or of any other State or Territory.

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## ADMISSION ON EXAMINATION.

### **Times, Places, and Subjects of Examination.**

Entrance examinations are held in August and in January of each year; but the examinations in January are primarily for the purpose of enabling students in the University to remove deficiencies incurred in previous entrance examinations. Applicants for



admission who present certificates from their teachers that they are prepared in the subjects they offer will be admitted to the January examinations. Such certificates must be filed with the Recorder of the Faculties, Berkeley, before the examinations.

In 1903 examinations will be held in Berkeley, August 7-11. The University may conduct entrance examinations at the same time in any city or at any school where the number of candidates and the distance from other places of examination may warrant it. Applications for this purpose should be sent to the Recorder of the Faculties, Berkeley, by mail, not later than June 1.

After passing the entrance examinations students who do not register in the office of the Dean of the Medical Department by September 1st will be denied admission to regular class standing unless they obtain special permission from heads of the departments in which they begin their work.

Matriculants who do not present satisfactory credentials are required to pass the examinations in the subjects named below. Subjects 1, 2, 3, 4, 5, 6a, b, and c; 11; 8 or 14 or 15a<sup>2</sup>, or 15b<sup>2</sup>, and either 10 and 13a or two of the main subdivisions (a, b, c, d) of 12.\*

**A. Oral and Written Expression.** Training in this subject enters into the proper treatment of all topics of study taken up in the school course, and extends to speaking and oral reading as well as to writing. Its aim is to secure to the student the ability to use his mother-tongue correctly, clearly, and pertinently on all lines upon which his thought is exercised.

A written test in this subject is required of all applicants for the status of Special Student in the Colleges of Letters, Social Sciences, Natural Sciences, and Commerce, excepting only those who hold teachers' certificates. In the case of other applicants, examination will be conducted in connection with English 1 and 14, and note will be made of correctness of form and adequacy of expression in the various papers written for other departments.

**1. English.** (2 units) Until January, 1907, applicants may present the items as announced in 1901.† After that the examina-

\*Subjects are numbered to correspond with those of the general list of preparatory subjects for admission to the Colleges at Berkeley. The amount of work represented by each of the subjects is as given in the General List of Preparatory Subjects in the Register of the University.

†1. English. (2 units.) The examination in this subject will presuppose thorough acquaintance with the following works, together with the practical knowledge of grammar and elementary rhetoric implied in such acquaintance: (1) *The Lady of the Lake*; (2) *The Alhambra*; (3) *Sir Roger de Coverley*; (4) *Classic Myths*; (5) *Short Poems*: Horatius, *The Deserted Village*, *The Cotter's Saturday Night*, *The Prisoner of Chillon* (or *Selections from Child Harold*), *Winter, Winter Morning Walk*, *Snow-Bound*, *Tam o' Shanter*, *The Ancient Mariner*, *D'Allegro*, and *Il Pensero*.

tion will presuppose thorough acquaintance with the following works, together with the practical knowledge of grammar and the fundamental principles of rhetoric implied in such acquaintance: (1) *The Lady of the Lake*; (2) *Ivanhoe* or *The Alhambra*; (3) *The best Ballads, Heroic Lays, and Poems of Nationality*—in all about 1,500 lines; (4) *Classic Myths*; (5) *The following poems: The Deserted Village, The Cotter's Saturday Night, Tam o' Shanter, The Ancient Mariner, The Prisoner of Chillon* (or *Selections from Childe Harold*), *Horatius, Snow-Bound*; (6) *The Merchant of Venice*; (7) *Julius Cæsar*; (8) *Essays and Addresses: Emerson's The Fortune of the Republic, The American Scholar; Lowell's Democracy, Lincoln* (two for study; one for reading\*).

While the examination at the University will be upon the subjects as stated above, accredited schools may, after consultation with the English Department, avail themselves of the following considerably enlarged list of substitutions: for (1), *The Lay of the Last Minstrel*; for (2), any one of these—*Scott's Quentin Durward, Kenilworth, Woodstock, Rob Roy, Tales of a Grandfather, Irving's Sketch-Book, his Tales of a Traveler, Hawthorne's The House of Seven Gables, Tom Brown at Rugby, Gulliver's Travels, Don Quixote*; for (3), an equivalent amount of purely literary selections from the Bible (*e. g.*, *Genesis, Exodus, Ruth, Esther*), or the *Pilgrim's Progress*; for (4), *Classic Myths* (two thirds), and, for the remaining one third, *Biblical Selections* (as above), or the *Classics in English translations*; if the latter be chosen, the following options are open: (a) *The Iliad, books I, VI, XXII, and XXIV* (Pope, Chapman, Lang, Bryant, and others), or (b) *The Odyssey, any four books* (preferably the *Episode of Ulysses among the Phæacians*), or (c) *Two of the following Greek dramas: Antigone, Alcestis, Iphigenia*; for (5), *short poems of similar scope and character*; for (6), *As You Like It, Midsummer Night's Dream, Twelfth Night, The Tempest*; for (8), an equivalent amount in the best prose explanatory of American ideals of citizenship, such

roso: (6) *The Merchant of Venice*; (7) *Julius Cæsar*; (8) *Macaulay's Warren Hastings*.

While the regular examinations will, for the present, be upon these subjects without option, schools on the accredited list of the University may, after consultation with the English Department, make such substitutions as the following: for (1), *The Lay of the Last Minstrel*; for (2), *Tom Brown at Rugby*, or *Ivanhoe*; for (3), *Addison's Select Essays*; for (5), *some twelve poems of similar scope and character*; for (6) or (7), *Macbeth*.

\* Items marked "for reading" are not for class-recitation, but for personal study outside of school with reports or discussions in class once a week or fortnight. The examination upon such items will not presuppose acquaintance with minute details. Whatever credit the pupil may acquire by his answers will be applied to offset deficiencies in other respects, or still further to improve his standing.

as: Washington's Inaugural of 1789; Jefferson's of 1801; Everett on Franklin, Washington, The Pilgrim Fathers; Choate on American Nationality, Daniel Webster; Sumner on the Scholar; Curtis on the Puritan Spirit, The Public Duty of Educated Men; Bryce on The Strength of American Democracy (American Commonwealth, Chapter XCIX).

**2. Arithmetic.** No examination in this subject will henceforward be set, since the study comes regularly in the grammar school, and since its essential processes are involved in Algebra.

**\*3. Algebra.** (1 unit.) Through simple quadratic equations; namely, the various methods of factoring, the remainder and the factor theorems, the theory of exponents, the calculus of radicals, simultaneous equations of the first degree with problems involving their solution, simple quadratic equations.†

**4. Plane Geometry.** (1 unit.) Including the general properties of regular polygons; their construction, perimeters, and areas; and the different methods for determining the ratio of the circumference to the diameter.

**5. History and Government of the United States.** (1 unit.) A knowledge of the outline of American History, and of the nature of Federal, State, and local government. This requirement represents three things: the regular use by the pupil of a text in history, such as Channing's *Students' History of the United States*, McLaughlin's *History of the American Nation*, or Montgomery's *Students' American History*, and a text in government such as Hinsdale's *American Government*, Ashley's *American Federal State*, or Bryce's *American Commonwealth* (1 vol. edition); systematic reading of assigned references; and the preparation of a note-book containing maps, concise topical outlines of summaries of the most important movements or institutions, notes on some of the reference readings, and a few carefully prepared brief papers with bibliographical notes.‡

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\*A suggested programme for mathematics in High Schools offering two, three, or four years of mathematical study:

1. Minimum requirement: Subjects 3, 4, simultaneously, second and third years.

2. Medium requirement: Subjects 3, 4, simultaneously, second and third years; Subjects  $12a^1$ ,  $12a^2$ , in fourth year.

3. Maximum requirement: Subjects 3, 4 in first and second years; Subjects  $12a^1$ ,  $12a^2$  in third year; Subjects  $12a^3$ ,  $12a^4$  in fourth year.

†Candidates who offer the old requirements for admission must include in Subject 3 ratio and proportion, the theory of quadratic equations, the solution of equations reducible to quadratic form, simultaneous quadratic equations, and problems involving their solution. These topics will ultimately be included in  $12a^3$  (Advanced Algebra).

‡The mention of any book does not mean that the University or the Department of History recommends it.

**6. Elementary Latin.** (2 units.) (a) Translation of easy prose into English. (1 unit.) The examination will cover the translation into idiomatic English of the subject-matter and implied grammar of selected passages from Caesar's Gallic War, books i-iv; but accredited schools may use any equivalent Latin text (or the matter contained in the Second-Year books), and are encouraged to increase the amount of reading indicated, by adding work from *Gradatim*; *Viri Romæ*, *Nepos*, or other books of Caesar. There should be some training in translation at sight from easy authors.

(b) Translation of simple English into Latin prose. (1 unit.) This requirement presupposes familiarity with the usual forms and ordinary constructions of the language. Continued training in translating detached sentences illustrative of constructions, and of connected sentences based on Caesar or an equivalent author, together with a thorough grammatical drill on the work read, is a proper preparation for satisfying this requirement.

**7. Advanced Latin.** (2 units.) Translation of Latin of average difficulty, and of English narrative into Latin prose.

(a) Third year Latin. (1 unit.) The examination will include the translation into idiomatic English of average passages from Cicero's Orations against Catiline, for Archias, and for Pompey's Military Command, and a selection from some other speech of Cicero to test ability in sight translation. The examination will also include questions on the usual forms and ordinary constructions of the language and on the subject-matter of the authors read. Accredited schools may read any equivalent Latin prose text, and are urged to add to the minimum outlined above Sallust's Catiline and additional orations of Cicero. The English passage offered for translation into Latin (c') will be a paraphrase from one of Cicero's orations, and this requirement calls for systematic training in Latin prose composition in connection with the reading.

(b) Fourth year Latin. (1 unit.) The examination will be based upon Virgil's *Æneid*, books i-vi; and with the addition of prosody, the scope of the examination will be similar to that outlined above for the Third year work. But the examination in Latin composition (c') will be connected discourse, based on Ciceronian Latin, and schools may also well give attention to the thorough grammatical review provided for in the best manuals of Latin composition. The stronger schools are urged to add to the *Æneid*, the *Eclogues* or *Georgics*, or some reading in Ovid. The test for translation at sight will be from poetry and not from prose.

**NOTE.**—Students may be recommended in 7a with the valuation of  $\frac{1}{2}$  unit, 7b  $\frac{1}{2}$  unit, and either division of 7c (composition)  $\frac{1}{2}$  unit.

**8. Greek.** (2 units.) (a) Greek Grammar, including accents, the ordinary inflectional forms, the simpler rules of syntax, and the translation of easy English sentences into Attic Greek. White's or Ball's First Greek Book represents the amount of preparation required.

(b) Xenophon's *Anabasis*, books I-IV, with questions on the syntax and subject-matter. The translation into Attic Greek of simple passages of connected narrative based on the *Anabasis*. [Parts I and II of Pearson's Greek Prose Composition represents the nature and amount of preparation required.]

**9. Greek.** (1 unit.) (a) Advanced Greek Composition [Part III of Pearson's Greek Prose Composition]. Sight Translation [fifty pages from the last three books of the *Anabasis*, or other Attic Greek] (b) Homer's *Iliad*, books I-III, with questions on Homeric forms and prosody. Students should be trained not only to write a correct metrical scheme, but also to read Homeric hexameters at sight, with fluency and expression.

Under the new matriculation requirement, schools which now give two and a half years to Greek will find it desirable either to reduce the time given to Greek to two years, covering Subject 8 only, or to increase to three years, covering Subjects 8 and 9. It is hoped that the larger schools will take the latter course, thus offering to students the opportunity to include one year of Greek among their elective units, after completing the two units which are required as an alternative for French or German. It is not possible for schools to gain accrediting in both 8 and 9 with less than three years' study of Greek, except under extraordinary circumstances. The adjustment of Greek work in the University to the different classes of students will be as follows:

1. Students who enter the University with credit for Matriculation Subjects 8 and 9 will be admitted to Greek 2 in Freshman year.

2. Students who offer only Matriculation Subject 8 will be admitted to a new Freshman course, which will cover the work of Matriculation Subject 9 in one year at the rate of three exercises a week. This will prepare them to take up Greek 2 in Sophomore year.

3. Students who bring no Greek to the University, but who wish to begin the study in the University, will be provided for, in the year 1902-1903, in a private class with a moderate tuition fee. It is the intention of the University to offer regular [free] instruction in Elementary Greek beginning with the year 1903-1904. But the period of life covered by the high school course is the time when the memory work involved in learning the elements of a highly inflected language like Greek, is most easily and successfully accomplished, and students who intend to study Greek are advised to begin the subject in the high school whenever this is possible.

**10. Ancient History and Geography. (1 unit.)**

(a) Greek history to the Roman Conquest, with the connected geography.

(b) Roman history to A.D. 800, with the connected geography.

Botsford's History of the Orient and Greece (or History of Greece), Botsford's History of Rome, Swoboda's Greek History, Myers's Rome, its Rise and Fall (last edition), Morey's Outline of Roman History, will serve to indicate the amount required.\* In connection with the text-book, the pupils are expected to acquire facility in making concise, logical outlines, and to embody some of these, with a few maps and evidences of collateral reading, in a note-book.

**11. Physics. (1 unit.)** The requirement represents at least a daily exercise during one school year, which falls within the last two years of preparation for college. It is expected that the ground covered will include fair representation of primary empirical laws from each of the main subdivisions of Physics.

The results called for demand vigorous and thorough instruction in the class-room, based upon laboratory exercises by the pupils and other experimental illustrations. In addition to the test of a written examination, it will be required that each candidate submit a laboratory note-book, signed by his teacher, as evidence that the main principles of the subject as treated have been presented experimentally. The following form of certificate is suggested as a definite statement of what is vouched for by the teacher's signature:

I hereby certify that these notes represent actual laboratory results obtained by [Insert name of pupil]. This statement applies to experiments numbered [Insert the numbers], entered upon pages [Insert the page-numbers] of this record.

Signed, \_\_\_\_\_ [Teacher's Name.]

Dated at \_\_\_\_\_ 19\_\_

*It is requested that this certificate be entered upon the last page of the student's laboratory record.*

**12. Advanced Mathematics, Chemistry, Botany, Zoology, Physical Geography.**

**12a. Advanced Mathematics. (1 unit.)** Any two of the following: (1) *Solid Geometry.* The fundamental propositions of solid and spherical geometry, accompanied by a suitable amount of exercise in problems—the whole to represent the work of one half-year. (2) *Plane Trigonometry.* The development of the general formulæ of plane trigonometry, with applications to the solution of plane triangles and the measurement of heights and distances.

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\*The mention of any book does not mean that the University or the Department of History recommends it.

(3) *Advanced Algebra, Part I.* Surds and complex quantities, ratio, proportion and variation, arithmetical, geometrical, and harmonic progressions, examples of other simple series, determinants, and elements of the theory of equations, including the solution of numerical equations by Horn's Method. (4) *Advanced Algebra, Part II.* Inequalities, limits, and indeterminate forms, exponentials and logarithms, natural logarithms, convergency and divergency of series, indeterminate coefficients with applications to integral functions, partial functions, expansion of functions, and summation of series, permutations and combinations, the binomial theorem for any index, exponential and logarithmic series, logarithmic computation.

**12b. Chemistry.** (1 unit.) This requirement represents five exercises a week for one year. Laboratory work is essential, and as much time as possible should be devoted to it. Much of the time should be spent in acquiring fundamental principles, omitting as much as possible the analytical work. A note-book should be kept and presented at the time of the examination in Berkeley.

**12c. Botany.** (1 unit.) A knowledge of the morphology and simpler physiology of the higher plants is required. This should be based upon a full year of practical work in the laboratory and to some extent, also, in the field. Careful attention should be paid to the recording of observations, by notes and drawings, together with the drawing of correct inferences from the observations. It is desirable that the pupils become familiar with the easier orders of flowering plants represented in the local flora. Bergen's *Elements of Botany* (Pacific Coast Edition), Spaulding's *Introduction to Botany*, Setchell's *Laboratory Practice for Beginners*, and Jepson's *Flora of Western Middle California*, indicate both the scope and the method of the work.

**12d. Zoology.** (1 unit.) To consist in the actual study of animals, and recitations, the practical work to be the center of the preparation. The practical work should be partly in the laboratory and partly in the field. The chief aim of the examinations in the subject will be to determine how closely and accurately pupils have observed. Guides for study: Harvey's *Introduction to the Study of Zoology*; Colton's *Practical Zoology*; Needham's *Elementary Lessons in Zoology*; Davenport's *Introduction to Zoology*; or Dodge's *Introduction to Elementary Practical Biology*. Jordan and Kellogg's *Animal Life* should be available for collateral reading.

**12e. Physical Geography.** (1 unit.) A course designed to cultivate habits of observation, comparison, and reflection; requiring a practical acquaintance with common natural phenomena

and the processes which underlie them. It should embrace experimental and field investigation of as many of the topics in the following list as may be practicable:

(1) The adjacent country. The general surface features of the country accessible to the pupils; hills, plains, valleys, streams, lakes, marshes, bays, verdure.

(2) Soils. Their variable character, composition, and derivation.

(3) Commonly occurring minerals. Their distinguishing characteristics.

(4) Rocks. Their character as aggregations of minerals and their broad distinction into aqueous and igneous.

(5) Plants. Their subdivision into broad types. Their relations to soil, water, and atmosphere.

(6) Animals. The distinguishing characters of the different classes, their habits, elements of comparative anatomy.

(7) The atmosphere. Its weight, composition, movements, temperature, and humidity; the formation of clouds and rain and the development of storms. Precipitation of moisture. The reaction of the atmosphere upon animal and plant life and its control of man's environment; its relation to forestry and irrigation.

(8) Streams. Their sources, character, and quantity of water; the lands through which they flow; their grades and corrosive action; their transportation and deposition of the waste of the land; their relation to lakes; underground waters. Glaciers.

(9) The earth. Its size, weight, and relation of land and water areas; its relief; its seasons; the distribution of heat and humidity over the earth's surface and its evolution; the relation of relief and climate to the distribution of plants and animals. Man's adaptation to his environment.

(10) The ocean. The salinity and temperature of its waters and the variation of these; its currents, tides, and waves; shore topography; relation of ocean currents to temperature and humidity of atmosphere.

(11) The cosmos. The real and apparent movements of the heavenly bodies.

So far as practicable the pupil should work without a text. For teacher's use the following books are recommended: *Physical Geography*, Dryer; *Physical Geography*, Gilbert and Brigham; *Physical Geography*, Davis; *Elementary Physical Geography*, Tarr.



**13a. Mediæval and Modern History.** (1 unit.) Myers's Mediæval and Modern History will indicate the period to be covered and the amount required.\*

**13b. English History.** (1 unit.) From the earliest times to the middle of the nineteenth century. Larned's History of England indicates approximately the amount required.\*

**14. English.** Until January, 1905, applicants may present themselves for examination on this subject as a whole and as announced in 1901;† or (if credit for only one unit is desired) on any selection from the items of that subject which may be equivalent to one half of it. After that date the subject will be divided as below. The examination both in 14a and 14b will presuppose a thorough acquaintance with the works covered as regards organization of thought and its development, style, metrical structure, place in literary history, life of the author, and relation to the age.

**14a. (1 unit.)** (1) Tennyson's *Idylls of the King* (for careful study, *The Passing of Arthur*; for reading,‡ with occasional

\*The mention of any book does not mean that the University or the Department of History recommends it. For suggestions as to note-books, etc., see notes under subjects 5 and 10. The proportions of the elements of the note-books must be varied to suit the previous training of the class.

†14. English. (2 units.) The examination in this subject will presuppose thorough acquaintance with the works named below, as regards organization and development of thought, as regards style and metrical structure, and as regards their relation to the author and his age: (1) Burke's Speech before the Electors at Bristol; Macaulay's First Speech on the Reform Bill; Webster's Reply to Hayne; (2) Poems, lyrical, reflective, didactic, and satirical; Milton's *Comus*, *Lycidas*, and *Sonnets II, XVI, XIX, XXII*; Dryden's *Alexander's Feast*; Pope's *Rape of the Lock*; Gray's *Elegy* and *The Bard*; Keats's *The Eve of St. Agnes* and *The Nightingale*; Shelley's *The Cloud* and *The Skylark*; Wordsworth's *Tintern Abbey*, *Ladamsia*, *Ode on the Intimations of Immortality*, and *Ode to Duty*; Lowell's *The Vision of Sir Launfal*; Browning's *A Transcript from Euripides* (in *Balaustion's Adventure*); Tennyson's *The Passing of Arthur*; Chaucer's *Prologue to the Canterbury Tales*; (3) Thackeray's *The Newcomes*.

While the regular examination will be confined to these subjects, schools on the accredited list of the University may, after consultation with the English Department, make such substitutions as the following: For (1), any three oratorical masterpieces of argument (including one of Burke's); for the *Rape of the Lock*,—the *Essay on Man*, or Dryden's *The Character of a Good Parson*, Pope's *Epistles to Jervas and Boyle*, and Johnson's *The Vanity of Human Wishes*; for Chaucer's *Prologue to the Canterbury Tales*,—selections from Clough and Arnold; for *The Vision of Sir Launfal*,—Tennyson's *Enid*, or his *Gareth and Lynette*; for *Comus*,—*Paradise Lost*, Book 1, or 2, or 5, or 6; for (3), *Silas Marner* and the *Vicar of Wakefield*, or Henry Esmond.

‡See note under English 1.

reports in class, two of the following: The Holy Grail, Elaine, Guinevere, Enid, Gareth and Lynette; (2) Lowell's The Vision of Sir Launfal, and the Commemoration Ode; (3) Macaulay's Clive or Warren Hastings (for *reading*\*); (4) Henry Esmond, or Silas Marner and the Vicar of Wakefield; (5) Milton's L'Allegro, Il Penseroso, and Comus; (6) Sir Roger de Coverley.

While the regular examination will be confined to these items, accredited schools may, after consultation with the English Department, make such substitutions as the following: For (1), Similar selections from the poetry of chivalry, or The Princess; for (3), The Second Essay on the Earl of Chatham; for (4), One of the following: The Newcomer, Adam Bede, The Mill on the Floss, Romola, Tale of Two Cities, David Copperfield, Nicholas Nickleby, Our Mutual Friend, Oliver Twist, The Cloister and the Hearth; for (5), Comus,—Paradise Lost, Book 1, or 2, or 5, or 6; for (6), an equivalent amount from Addison's Select Essays, the Essays of Elia, the Autocrat of the Breakfast Table, Stevenson's Virginibus Puerisque, or Burrough's Essays, or Warner's Back-log Studies, or Curtis's Prue and I.

14b. (1 unit). (1) Arguments and Orations: Burke's Speech before the Electors at Bristol; Macaulay's First Speech on the Reform Bill; Webster's Reply to Hayne; (2) The Essay, literary or ethical; Carlyle's Essay on Burns, or Emerson's Compensation and Self-Reliance (for *reading*,\* with occasional reports in class); (3) A general outline of English Literature, illustrated by the study, in chronological order, of Chaucer's Prologue to the Canterbury Tales; Shakespeare's Macbeth (reading and reports); Milton's Lycidas and Sonnets II, XVI, XIX, XXII; Gray's Elegy; Wordsworth's Tintern Abbey, Ode on the Intimations of Immortality, and Ode to Duty; Keats's Eve of St. Agnes and The Nightingale; Shelley's The Cloud and The Skylark; Browning's A Transcript from Euripides (in Balaustion's Adventure); Arnold's Scholar-Gypsy (or Balder Dead); Tennyson's Enone.

Schools on the accredited list may, after consultation with the English Department, make such substitutions as the following: For (1), any three oratorical masterpieces of argument (including one of Burke's); for (2), *literary*: one of the following: Carlyle or Macaulay on Boswell's Life of Johnson, an equivalent in Boswell's Life, Macaulay's Addison ( $\frac{1}{2}$ ) and Milton ( $\frac{1}{2}$ ), an equivalent from Lowell's Literary Essays, such as his Chaucer, or from Arnold's, such as his Preface to the Poems of Wordsworth ( $\frac{1}{2}$ ), and his Emerson ( $\frac{1}{2}$ ), Ruskin's Sesame, Harrison's Choice of Books; *ethical*: an equivalent from Bacon's Essays, or from Moulton's edition of the Proverbs, the Psalms, the Book of Job, or the

\*See note under English 1.

writings attributed to St. John; for the selections in (3) from Dryden, Shelley, Browning, Tennyson, other poems of those authors similar in scope and character. It is also recommended that, so far as time may permit, the best short poems of our American authors, and of the more recent English poets, be read in class, though not necessarily for purposes of minute study.

**15a<sup>1</sup>. Elementary French.** (1 unit.) Candidates who matriculate with both Latin and Greek and who have studied French during the last year of their High School course in a special class, may be credited for that work with one unit; provided that this work be approximately equivalent to the regular Elementary French as defined below.

**15a<sup>2</sup>. Elementary French.** (2 units.) French is a living language, and the object of the instruction should be to teach the student to read, write, and speak it as such. Therefore, as much French as possible should be used in class from the beginning. Translation into English should be sparingly used. It is preferable to get at a student's understanding of a passage by simple questions in French based on the passage. The answers of the student should be always in French.

At the end of the Elementary Course the student should be able to pronounce French accurately; to read French prose not of great difficulty; to understand, write, and speak French in simple sentences based on some text or on the ordinary affairs of life.

The work should comprise: (1) Careful attention to pronunciation. (2) The essentials of the grammar, especially the regular and most common irregular verbs, the forms and uses of all classes of pronouns, the uses of the prepositions and conjunctions. (3) The reading of some 300 duodecimo pages of modern prose. (4) Writing based on the texts read. Dictation is a useful exercise. The class work should be as far as possible in French.

**15a<sup>3</sup>. Intermediate French.** (1 unit.) At the end of the Intermediate Course the student should be able to read ordinary French prose; to write ordinary French in the narrative form; to carry on a simple conversation in French.

The work should comprise: (1) A review of the essentials of the grammar, especially the use of the auxiliary verbs; the meaning of the moods and tenses; a rather full knowledge of irregular verbs; the essentials of syntax, especially the most common uses of the subjunctive. (2) The reading of from 400 to 600 pages, from at least four standard authors, some of which should be in the dramatic form. (3) The writing of letters and short themes and the reproduction of passages of texts in French. The course should be carried on entirely in French.

15a<sup>1</sup>. **Advanced French.** (1 unit.) At the end of the Advanced Course the student should be able to read more difficult French of a literary character of not earlier date than the seventeenth century; to write in French a short essay on some simple subject connected with the works read; to carry on a conversation in French.

The work should comprise from 600 to 1000 pages of standard French, classical and modern; the writing of numerous short themes in French; explanation and discussion of the text in French. The course should be given entirely in French.

The attention of modern language teachers is called to the valuable "Report of the Committee of Twelve."

15b<sup>1</sup>. **Elementary German.** (1 unit.) Candidates who matriculate with both Latin and Greek and who have studied German during the last year of their High School course, in a special class, may be credited for that work with one unit. It is expected that a year's work, under these circumstances, will be approximately equivalent to the regular elementary German as defined below, and will enable the student to continue the study of German in the same college course as those who were credited with 15b<sup>2</sup>.

15b<sup>2</sup>. **Elementary German.** (2 units.) The ability to read at sight easy German prose, to translate correctly simple English sentences into German, and to understand and answer in German simple questions on passages in the reading; a knowledge of the elements of German grammar.

The reading in Elementary German should amount to about 150 pages of graded modern prose.

The requirement in grammar includes: the regular inflection of nouns, adjectives, articles, pronouns, and weak verbs; the inflection of the more usual strong verbs; the more common prepositions; the ordinary uses of the modal auxiliaries; the elements of syntax, especially the rules concerning word-order and the use of the subjunctive.

15b<sup>3</sup>. **Intermediate German.** (1 unit.) The ability to read at sight ordinary German prose or poetry, to translate correctly into German a passage of easy English, and to carry on a simple conversation in German; a knowledge of the essentials of German grammar.

The reading in Intermediate German should amount, in addition to that done in the Elementary Course, to about 300 pages of recent and classical prose and poetry.

The requirement in grammar includes the inflection of the less usual strong verbs, the rules concerning the use of articles, cases, auxiliaries of all kinds, tenses and moods, and the elements of word formation.

**15b<sup>4</sup>. Advanced German.** (1 unit.) The ability to read at sight any not exceptionally difficult piece of German prose or poetry from the literature of the last one hundred and fifty years, to translate into German a passage of ordinary English prose, to answer in German questions relating to the lives and works of great writers studied, and to write in German a short, independent theme upon some assigned subject.

The reading in Advanced German should amount to about 400 pages of good modern (including eighteenth century) literature.

**15c. Spanish.** (2 units.) (1) An accurate knowledge of the essentials of the grammar, especially the verbs. (2) The ability to read ordinary Spanish prose, of which from 400 to 600 duodecimo pages should be read. (3) The ability to write ordinary Spanish. (4) The ability to carry on a simple conversation based on a text or on the ordinary affairs of life. [For more detailed suggestions, see Elementary French, subject 15a<sup>1</sup>.]

#### REQUIREMENTS FOR ADMISSION BEGINNING WITH THE ACADEMIC SESSION 1905-06.\*

Beginning with the academic session of 1905-06 the Medical Faculty will demand at least two full years of college work from all applicants for admission.

This regulation renders it necessary for the applicant to present, as part of the high or secondary school preparation for the academic work, the highest entrance requirements in English, mathematics, and chemistry, designated in the Register of the University of California as Subjects 14, 12a (1 and 2), and 12b, as well as the physics, Latin, and history required for entrance under Subjects 11 and 1 to 7 inclusive. Further qualifications in modern languages are very desirable before the student enters upon the preliminary academic work required of all applicants for admission to the Medical Department.

Beginning with the academic year 1905-06 all students desiring to enter the first year of the medical course and all new students seeking advanced standing must present evidence of having completed at least two full years of preliminary training in the undergraduate department of a college or university of recognized standing. Satisfactory evidence must also be presented that dur-

\*The Faculty of the Medical Department of the University reserves the right to make these requirements active beginning with the academic session 1904-05, if it be judged the best policy for the department.

ing these two years the applicant has completed courses of the following values:

**Chemistry.** (1) A course in general inorganic chemistry, including lectures, recitations, and laboratory work. *Lectures and recitations two or three hours; laboratory work five or six hours a week throughout one year.* In this course should be included the main facts of physical chemistry.

(2) Quantitative analysis. Gravimetric and volumetric. *Laboratory nine hours a week, one half-year.*

(3) Organic chemistry. A course of lectures, demonstrations, and recitations in organic chemistry. *Two hours a week, one half-year.*

Courses 1, 2, 3, 4, 5a, and 8 in the Department of Chemistry in the University of California cover the work outlined above, which constitutes the minimum required amount of chemistry.

**Physics.** (1) A course in general physics, including lectures, recitations, and laboratory work. *Seven hours per week throughout one year.*

(2) A laboratory course in physical measurements. *Six hours per week throughout one year.*

Courses 1 and 3 in the Department of Physics of the University of California cover the work outlined above, which constitutes the minimum required amount of physics.

**Biology.** (1) A general course in zoology, giving a knowledge of the main facts of biology, covering structure, life-history, and vital activities of selected types of animal life. The chief points of cytology and development, as well as a clear conception of the doctrine of descent, should also be given in this course. *Two hours a week throughout one year.*

(2) Laboratory work in zoology covering the points brought out in Course 1, with objectivity and the training of the powers of observation as its special features. Practice in the recording of scientific phenomena both by means of word description and drawings should also be given. *Six hours per week throughout one year.*

Courses 1a and 1b in the Department of Zoology in the University of California cover, in general, the minimum work required in biology.

**English.** A course in English composition consisting of consultation and theme work. *At least three hours per week throughout one year.*

**French and German.** Applicants must possess a reading knowledge of scientific French and German.

The standard in the required courses outlined above must correspond and be at least equal to those given in the academic department of the University of California.

It is suggested that students should also during their preliminary academic training take certain elective courses which would materially increase the efficiency of the preparation for their later work in medicine. Advanced mathematics, comparative anatomy, embryology, laboratory work in organic chemistry, and advanced work in physics covering the theory of solutions, are courses of this nature. Entering students, therefore, are urged to present them on admission with the required work. The adequate training of a physician certainly presupposes a knowledge of physics, chemistry, biology, and the modern languages as outlined above; but the need of a broad foundation in general culture can not be overestimated, and students should select from the curricula of their colleges as many courses as possible beyond those demanded and recommended by the Faculty of the Medical Department.

Although the preliminary collegiate work will not be required of all students until the session of 1905, those who enter the medical school before that time are urged, for the sake of their future work in medicine, to conform as nearly as possible to the preparation outlined above, and to present on admission as many of the courses in physics, chemistry, and biology as circumstances permit.

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### ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second, third, and fourth year classes only upon examinations covering the subjects in which they seek to be accredited. They must first present to the administrative officer evidence that they have satisfied the regular matriculation requirements, and obtain from the Dean authorization for examination.

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### JOINT COURSE IN NATURAL SCIENCE AND MEDICINE GRANTING IN SIX YEARS THE DEGREES OF B.S. AND M.D.

Beginning with the academic session of 1905,\* when the new entrance requirements of the Medical Department go into effect, all students who satisfactorily complete the first two years of medicine will be admitted to the degree of B.S. in this University. This follows because the new requirements and the present pre-medical

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\*The Medical Faculty reserves the right to make these new requirements active at the beginning of the academic year 1904-05, if it be judged the best policy for the department.

course are precisely similar, and all students would then enter the joint course now established by the combined action of the Medical Faculty and Academic Council on advanced standing. This plan goes into effect in the academic year 1902-03 and covers six years' residence in the University, two in the College of Natural Sciences of Berkeley, and four in the Medical School in San Francisco. The members of the Medical Department teaching the scientific branches become *ipso facto* members of the Faculty of the College of Natural Sciences, and on satisfactory completion of the first two years of the medical course, this Faculty recommends the student for the degree of B.S.

The requirements for entrance in this course are those of the College of Natural Sciences, except that in Subject 12, mathematics and chemistry must be offered. Prospective students who contemplate taking this course are advised to present, likewise, additional credits in modern languages and mathematics. The following is an outline of the course in the College of Natural Sciences at Berkeley covering a period of two years:

	Units.
English .....	4
French .....	6
German .....	6
Mathematics .....	6
Physics .....	12
Chemistry .....	15
Zoology .....	15
Military Science and Physical Culture .....	4
Electives—To be determined, as to amount and subjects for each student, by the Joint Committee of the Academic and Medical Faculties.	
Total .....	68

The details concerning the extent and scope of these courses can be found in the new entrance requirements for the Medical Department, in which their content and aim are briefly described. Since the two years work in the College of Natural Sciences is largely spent in prescribed work, little time is allowed for other subjects in general culture; and as students are urged to elect such courses, this can best be done by extending their period of residence in the collegiate department to three years.

Students intending to take the course should enter upon it at the beginning of the freshman year. They should also seek the advice of the chairman or some other member of the Joint Committee of the Academic and Medical Faculties before making out their schedule of studies for the first term of the freshman year.



After the completion of their work in the Academic Department in Berkeley, students enter the Medical School to complete the studies leading up to the bachelor's degree. These consist of

	Units.
Anatomy .....	38
Physiology .....	19
Pathology .....	18
Total .....	75

The work of these courses is described in detail in another part of this announcement.

After receiving the bachelor's degree, students enter upon the two years' study of the clinical branches of medicine, and upon satisfactory completion of these are granted the degree of M.D.

Special note should be taken by all students looking to the study of medicine in this University, that the preliminary course here described is in its essentials the only preparation that will admit to the clinical branches of medicine. Those, therefore, who are enrolled in the Colleges of Letters or Social Sciences, or in any of the technical colleges, and desire to study medicine, will need to supplement the usual courses in these colleges by such essentials of the course here outlined (French, German, Physics, Chemistry, and Biology) as may not have been included in their original schedules.

### HOSPITAL APPOINTMENTS.

The position of interne, or House Physician and Surgeon, in the City and County Hospital, is open each year to five members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year and secure opportunities for accumulating an invaluable experience in various fields of medicine and surgery. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the Medical Department or by competitive examination.

#### Hospital Appointments. From Class of 1903.

*City and County Hospital* (San Francisco)—Paul E. Biber, Rene Bine, James A. Ellis, James K. Hamilton, Henry H. Lissner.

*St. Luke's Hospital*—George D. Culver, Howard G. Hill, Harry P. Roberts, Frank L. Putman.

*U. S. Marine Hospital*—James R. Hurley, Thomas R. McNab.

*German Hospital*—Louis I. Breitstein.

*St. Mary's Hospital*—Joseph J. Kavanagh, David E. Stafford.

*Mount Zion Hospital*—Earle A. Stone, Clarence A. Wills.

*Sacramento County Hospital*—Frank R. Girard.

*Children's Hospital*—Viola R. Olcovich, Caroline Rosenberg.

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## BOARDING.

The expense of living in San Francisco is not great. Good board with room rent may be procured at the rate of \$5.00 per week at a convenient distance from the college building.

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## CLINICAL FACILITIES IN SAN FRANCISCO.

The clinical work of the Medical Department is given in the Out-Patient Dispensary, which is situated on New Montgomery Street, in a densely populated district of the city, and has a large clientele of patients of the poorer class. The dispensary is open from 9 A. M. until 6 P. M. each day, and students of the third and fourth years have practical instruction upon the various ambulatory cases that present themselves for treatment. The ward work and clinics are held in the wards of the City and County Hospital, where an abundance of material of all sorts is obtained for the work in medicine, surgery, and gynecology. Through the liberal policy of the Board of Supervisors and the Board of Health the medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department. In the near future, however, it is to be hoped that some liberal-minded citizen will make a donation for a University Hospital which will be completely under the control of the institution and where even more extensive opportunities for bedside instruction can be given to the students during their clinical years.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

Thus far none of the numerous private hospitals has been available for medical instruction, but it is hoped that their directors may soon throw open their wards for the use of the students.

The Board of Supervisors contemplates the erection of a new City and County Hospital on the pavilion system, which will be modern in every respect and will provide improved laboratory and clinical facilities for medical students.

3 MD

## FEES.

*First Year.*

Matriculation .....	\$5 00
Tuition .....	150 00
Dissecting material .....	10 00

A key and breakage deposit of \$15.00 is required for the use of lockers and to cover cost of material used in the laboratories and damage to college buildings and equipment. At the close of the session the unexpended balance is returned to the student.

*Second Year.*

Tuition .....	\$150 00
Dissecting material .....	12 00
A key and breakage deposit of .....	15 00

*Third Year.*

Tuition .....	\$150 00
A key and breakage deposit of .....	10 00

*Fourth Year.*

Tuition .....	\$150 00
Graduation .....	25 00
A key and breakage deposit of .....	10 00

A rental of \$5.00 a year is charged for the use of a microscope, and \$2.00 for an immersion lens. Each student must provide himself with a microscope. In case the department is unable to supply the students with them, arrangements will be made with a firm in San Francisco to rent microscopes at the college rate. Students are urged to purchase instruments for their own use.

## LIBRARY.

The library and reading room of the Medical Department is on the first floor of the main building and contains about 2,300 volumes. The catalogue shows that there are on the shelves many of the current text-books and some of the better monographs. Along certain lines the library is particularly strong and it will be the policy of the department by frequent purchases to make the collections uniform and to obtain as soon as possible complete files of the more important periodicals published in English, French, and German. Among the journals in the library are the following, with the exception of occasional missing volumes, the sets of which are complete:

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anato-

mische Hefte, *Annals of Surgery*, *Archiv für Anatomie und Entwicklungsgeschichte*, *Archiv für Entwicklungsmechanik der Organismen*, *Archiv für Klinische Chirurgie*, *Archiv für Pathologische Anatomie und Physiologie*, *Archives of Surgery*, *Arbeiten aus dem Kaiserlichen Gesundheitsamte*, *Berliner Klinische Wochenschrift*, *Boston Medical and Surgical Journal*, *British Medical Journal*, *Centralblatt für Bakteriologie und Parasitenkunde*, *Centralblatt für Chirurgie*, *Centralblatt für Gynecologie*, *Centralblatt für Klinische Medizin*, *Congrès Français de Chirurgie*, *Deutsche Medicinische Wochenschrift*, *Ergebnisse der Anatomie und Entwicklungsgeschichte*, *Fortschritte der Medizin*, *Jahrbücher der Gesamten Medizin*, *Jahresbericht der Gesamten Medizin*, *Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte*, *Jahresbericht über die Fortschritte der Anatomie und Physiologie*, *Jahresbericht über Pathogenen Mikroorganismen*, *Journal of the American Medical Association*, *Journal of Comparative Neurology*, *Journal of Experimental Medicine*, *Journal of Hygiene*, *Journal of Medical Research*, *London Lancet*, *Medical Record*, *Medical Review of Reviews*, *Morphologische Arbeiten*, *New York Medical Journal*, *Philadelphia Medical Journal*, *Revue de Chirurgie*, *Transactions of American Surgical Association*, *Verhandlungen der Deutschen Gesellschaft für Chirurgie*, *Wiener Medizinische Wochenschrift*, *Zeitschrift für Chirurgie*, *Zeitschrift für Morphologie und Anthropologie*.

## ORGANIZATION OF INSTRUCTION.

### Session of 1903-04.

**Summary of Courses.** In conformity with the practice of the University, instruction is divided into three classes—didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory sessions, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value. This is likewise the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the

instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represents the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible the work has been concentrated. The advantages of concentration are many. The system offers more work to the student, and is conducive to favorable conditions of study, in that students in the prolonged and consecutive periods apply themselves better and enter more deeply into the subject. It also grants to the student much more free time, time of the greatest value for purposes of private study or advanced work.

It is believed that the students on account of this free time will take advantage of the elective courses offered by the departments of anatomy, physiology, and pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

### CLASS STANDING AND EXAMINATIONS.

For the determination of class standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendations for Internships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

*First year:* Microscopic anatomy, chemical physiology, elementary physiology.

*Second year:* Systematic human anatomy (including embryology), general physiology, morphological pathology, chemical pathology, and bacteriology.

*Third year:* Therapeutics, materia medica, obstetrics, and general surgery.

*Fourth year:* Internal medicine, clinical medicine, general surgery, clinical surgery, gynecology, operative obstetrics, and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that more than one condition can not be carried into the second, third, or fourth year, and this must be passed in order to render the student eligible for the examinations held at the end of that session. Under all circumstances, however, prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. The Faculty reserves the right to sever at any time the connection of any student with the Medical Department for what it deems either mental or moral unfitness for a career in medicine.

#### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.
3. He must have done the required work and passed the stated examinations.
4. He must have paid in full the college fees.

## COURSES OF INSTRUCTION.

### ANATOMY.

JOSEPH MARSHALL FLINT, M.D., Professor of Anatomy.

IRVING HARDESTY, Ph.D., Instructor in Anatomy.

ROBERT ORTON MOODY, M.D., Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in the Hearst Anatomical Laboratory, which occupies rooms on several floors in the main medical building. The laboratories of the department have been entirely rebuilt and newly equipped. On the top floor are eight small dissecting rooms with capacity from one to three tables each. The rooms are lighted from the ceilings, well ventilated, and fitted with special reference to the effect of a clean and pleasant environment upon the work of the students. The classes are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins at any desired pressure. After this process is completed the bodies are preserved in wood alcohol vapor or a carbolic solution.

The teaching museum, consisting of specially prepared correlations, injections, dissections, and models, is located in a large hall near the dissecting rooms.

The laboratory for microscopic anatomy is very large and has abundant north light. It is outfitted with microtomes and all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system by which a certain amount of selection is allowed in the regular work of the department.

### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the

microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology; (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections; (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student has a typical set of comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize him with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with laboratory drawings and contain an epitome of the student's notes and collateral reading.

#### 1. Histology.

DR. HARDESTY.

In this course the anatomy of the cell, its variations in form, the conditions and processes of its proliferation and the modifications which result in its differentiation into a cell of specialized type are considered. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as they are composed of cells and cell products and derived from one or the other of the germ layers. The study is always comparative.

*First year, 4 laboratory periods, 4 lectures per week, for 9 weeks.*  
3½ units.

#### 2. Microscopic Organology.

DR. HARDESTY.

The organs are discussed with reference to the form, arrangement, and number of the fundamental tissues composing them, with special reference to the structural and functional relations to other organs. In each case the student begins first with the tissue in situ and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

*First year, 4 laboratory periods, 4 lectures per week, for 9 weeks.*  
3½ units.



**3. Neurology.**

Dr. HARDESTY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with the view to tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

*4 lectures, 4 laboratory periods per week, for 9 weeks. 3½ units.*

## SYSTEMATIC HUMAN ANATOMY.

The courses in systematic anatomy are given by practical work entirely. There are no lectures or quizzes. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin sections. In order to emphasize the importance of original work, a series of statistical investigations are being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

**4. Osteology.**

Dr. MOODY.

Each student is loaned a skeleton and is required to model in clay and draw each bone in the body.

*First year, 6 half days per week, for 6 weeks. 4¾ units.*

**5. Head and Neck.**

Prof. FLINT and Dr. MOODY.

*First year, 6 half days per week, for 7 weeks. 4¾ units.*

**6. Arm and Thorax.**

Prof. FLINT and Dr. MOODY.

*First year, 6 half days per week, for 7 weeks. 4¾ units.*

**7. Leg and Abdominal Viscera.**

Prof. FLINT and Dr. MOODY.

*First year, 6 half days per week, for 7 weeks. 4¾ units.*

In his second year the student must repeat at least two of Courses 5, 6, and 7, provided they have already dissected the entire body in their first year. Research will be accepted in lieu of these courses.

**8. Organogenesis and Topographical Anatomy.** Prof. FLINT.

The development of the various organs from their first appearance in the germinal layers to the conditions found in the adult body is briefly considered, together with the mechanics of the development of organs, the process of growth and regeneration.

*First and second years, 1 lecture and demonstration per week. 2 units.*

**9. Special Anatomy for Physicians and Advanced Students.**

Prof. FLINT and Dr. MOODY.

This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis, and abdominal viscera. The work is largely independent. A limited number of regular students will be permitted to take this course as an elective after finishing the required work of the department.

*Hours arranged to suit applicants. 4-8 units.*

**10. Research.**

Prof. FLINT and Dr. HARDESTY.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. A certain number of units in Course 10 will be accepted in lieu of the required systematic anatomy of the second year from students who have shown marked ability in their work.

**PHYSIOLOGY.**

(Including Physiological Chemistry and Pharmacology.)

JACQUES LOEB, M.D., Professor of Physiology.

FRANK T. GREEN, Ph.G., Associate Professor of Physiological Chemistry.

MARTIN H. FISCHER, M.D., Assistant Professor of Physiology.

———, Instructor in Physiological Chemistry and Pharmacology.

JOHN B. MACCALLUM, A.B., M.D., Assistant in Physiology.

GEORGES BULLOT, M.D., Assistant in Physiology.

———, Assistant in Physiological Chemistry.

———, Assistant in Pharmacology.

The courses in Physiology are given during the first and second years. The instruction consists of lectures and recitations in physiology, physiological chemistry, and pharmacology, and laboratory work in each of these departments.

**1. Lectures in Introductory Physiology.**

Dr. FISCHER.

In the lectures are covered the main facts of the physiology of the blood and circulation, respiration, absorption and secretion, muscle-nerve physiology, the physiology of the central nervous system, reproduction, and development.

*3 lectures a week, 9 weeks.*

**2. Recitations in Introductory Physiology.** Dr. MACCALLUM.

One recitation a week, for nine weeks, on the subjects outlined in Course 1.

**3. Laboratory Work in Introductory Physiology.**

Drs. FISCHER, MACCALLUM, and BULLOT.

The course is designed to cover the main experiments in the physiology of the blood and circulation, respiration, central nervous system, and special senses.

*3 three-hour laboratory periods a week, for 9 weeks.*

**4. Lectures in General Physiology.**

Dr. FISCHER.

In these lectures are discussed metabolism, absorption, secretion, protoplasmic motion, the physiological effects of ions, the tropisms and artificial parthenogenesis.

**5. Recitations in General Physiology.**

Drs. FISCHER and MACCALLUM.

One recitation a week, for nine weeks, on the lectures outlined in Course 4.

(a) *A Study of Ferments.* The ferments are considered from the point of view of chemical kinetics. In this course they are studied in detail in order that the student may become familiar with the phenomena of fermentation. To this end soluble ferments will be extracted or expressed from the tissues, glands, or germs containing them, and with this material the study of the phenomena of fermentations will be carried on.

**6. Laboratory Work in General Physiology.**

Drs. FISCHER, MACCALLUM, and BULLOT.

The laboratory experiments are designed to elucidate the points touched upon in the lectures.

**7. Mammalian Physiology.**

Drs. FISCHER, MACCALLUM, and BULLOT.

Attendance upon this course is limited to a small number of specially qualified students. The course is a combination of conferences and laboratory work illustrating the classical experiments in mammalian physiology.

*One day a week, for 9 weeks.*

**8. The Physiological Effects of Ions.**

Dr. FISCHER.

A course limited to specially qualified students. The course is a combination of conferences and laboratory work on the physiological effects of ions.

*One day a week, for 9 weeks.*

**9. Chemical Physiology.**

The laboratories in chemical physiology are well equipped, the students have individual desks, and are supplied with individual

sets of reagents and apparatus. There are hoods for digestions, distillations, and desiccations. The balance room contains eight balances of the latest designs of Sartorius and Staudinger, a spectroscope, polariscope, refractometer, a large gas-pump, and a dozen microscopes. It is the aim of the course to elucidate the chemical aspects of physiology to the end of general physiological knowledge, rather than of specialized chemical training. The student is sufficiently trained in technique to enable him to carry through the various procedures in analysis, but the point of view is that of physiology. All work is practical and individual. The course is given during the last period of the first year.

As announced in the new requirements for admission to the Medical Department, it is the intention to relegate to the pre-medical collegiate years all instruction in pure chemistry. Until these requirements shall have become operative, the course in chemical physiology will be preceded by a brief course in organic chemistry for the benefit of those students who have not received adequate instruction therein.

The course consists of:

(a) A study of the carbohydrates. The starches, primary and secondary sugars are systematically taken up, and their relations to digestion and nutrition expounded.

(b) A study of the fatty acids, fats, and adipose tissues. The physical and chemical relations of the fats are defined, and their relations to digestion, nutrition, and metabolism elucidated.

(c) A study of the proteins, their derivatives, antecedents, and constituent groups. The particular proteins are exhaustively studied, and particular stress is laid upon the formation of proteins in the synthetic work of the animal and vegetable body, their reduction in the course of digestive and bacteriological enzymic action, and their reorganization in the process of nutrition. The proteins in the body—of the muscle, fibrous tissue, cartilage, tendons, reticulum, thyroid body, and the glands—are studied seriatim.

Following this the individual systems and tissues of the body are studied. These include: The blood and the lymphatic system, the bones, the glands of the body, the skin, the hair, the liver, the bile, the nervous system, the organs of digestion, and the processes of digestion, absorption and assimilation, and the feces. The most important of these are studied by the entire class, the others in sections. Particular attention is paid to the urine, which is studied from the physiological point of view in the attempt to secure for the students a clear conception of the katabolic processes of metabolism.

It is the aim of the department that this course shall supplement and form the counterpart to the course in general physiology.

Regular conferences are held in connection with the course. Students showing proficiency are encouraged to elect further work in chemical physiology, and so soon as they are independent will be placed on research upon some topic connected with the subject.

Since it is impossible to cover the entire subject, such aspects of the various topics only are selected as illustrate salient features.

5 lectures, 15 hours laboratory work per week.

## PATHOLOGY.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

H. A. L. RYFKOGEL, M.D., Instructor in Pathology.

WILLIAM T. JANE, Technical Assistant.

Instruction in pathology is given in the Hearst Laboratory of Pathology during the second year, and at the City and County Hospital during the fourth year. The courses consist entirely of laboratory work; formal didactic teaching is not employed. The instruction consists of individual work upon the part of the student, supplemented by such demonstrations and discussions as are considered necessary to fix and amplify the knowledge gained in first-hand study. The inductions, the theoretical and practical relations, and the numerous general considerations in pathology are brought into the course in the form of daily lectures that are opportune by virtue of the particular practical work in hand. It is believed that this correlation of general pathology to concrete laboratory work is more effective than a formal didactic course, and more rapidly develops the scientific independence of the student. Since adequate equipment is a *conditio sine qua non* of rapid and sustained work, the students' laboratories have been equipped with the best instruments and apparatus of latest design. It is the principle of instruction in this department to bring the student into a contemplation of pathology from the biological point of view, since only from this standpoint can the scope and dignity of the science and its relations to hygiene and preventive medicine be adequately understood and valued. Properly studied, pathology forms the substratum of clinical medicine, and many of the manipulations employed in pathological studies are indispensable to the practice of medicine. A knowledge of pathology not only endows the student with conceptions of the nature of disease, but also trains in the diagnosis of disease.

### 1. Morphological Pathology.

Prof. TAYLOR and —

The course includes instruction upon the chief organs and tissues in the order of their importance. It is realized that the entire subject can not be covered, and in lieu of such an attempt

the principal lesions of the more important organs and tissues are studied in an exhaustive manner. Throughout the course emphasis is placed upon the importance of acquiring accurate visual images of the lesions.

In the study of the lesions of disease the students are taught to found their observations upon an ultimate analysis of tissue units upon the basis of cytology and microscopic anatomy. From the results of these ultimate analyses the student will build up the groupings which constitute pathological lesions, thus avoiding all confusion of theoretical classifications and didactic schemata. The gross lesions are demonstrated in the fresh state and upon Kaiserling preparations from the museum. In the study of etiology, the experiment is employed whenever feasible and advantageous. Inflammation, in its various phases, is studied largely from the experimental point of view. Systematic reports and original drawings are regular portions of the work.

*4 lectures, 12 hours laboratory work per week, 18 weeks. 8 units.*

Prerequisite: Completion of the course in first year histology and microscopic anatomy.

## **2. Chemical Pathology.**

Prof. TAYLOR.

In this course disease is studied from the point of view of disturbed functionation; this and the previously detailed course contrast pathological physiology with pathological anatomy. Physico-chemical biology is becoming daily of greater importance, and upon its study depends the comprehension of the nature of many diseases and their progressions, this being particularly true of the microorganismal infections and the metabolic diseases. The course includes the chemical study of the organs and tissues of the body in various diseases, of bacterial processes, of exudates and transudates, and of the gastric contents, the feces and the urine.

*5 lectures, 15 hours laboratory work per week, 9 weeks. 5 units.*

Prerequisite: Completion of the first year course in chemical physiology.

## **3. Bacteriology.**

Dr. RYFKOGEL.

The first portion of the course consists in the study of microbiology. Microorganisms of many types and kinds, both saprophytic and pathogenic, are exhaustively studied. Following this the students are instructed in the narrower domain of bacteriological pathology, with particular reference to bacterial intoxication and immunity. The infections are studied in original lesions and by experiment, and the relations of microorganisms to general and special pathological conditions are thus elucidated.

*5 lectures, 15 hours laboratory work per week, 9 weeks. 5 units.*

Prerequisite: Completion of the first year course in histology and microscopic anatomy.

**4. Autopsy Course.**

Prof. TAYLOR.

During the fourth year an autopsy course is conducted in the City and County Hospital. The members of the fourth year class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students.

*Two sections of 1 semester each, 4 hours per week, except in the event of absence of material. 1 unit.*

**Research Department of Hearst Pathological Laboratory.** The private laboratories of pathology are installed with equipments for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

**THERAPEUTICS.**

RICHARD M. H. BERNDT, M.D., Instructor in Therapeutics.

CHAS. LEWIS MORGAN, M.D., Lecturer on Materia Medica and Pharmacy.

**1. Physiological Action of Drugs.**

Dr. BERNDT.

The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.

*Second year, 2 hours per week, 27 weeks. 3 units.*

**2. Materia Medica and Pharmacy.**

Dr. MORGAN.

The course is purely practical, embracing the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

**MEDICINE.**

WILLIAM WATT KERR, M.D., Professor of Clinical Medicine.

HERBERT C. MOFFITT, M.D., Professor of the Theory and Practice of Medicine.

CLARENCE QUINAN, M.D., Instructor in Medicine.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.

GEORGE F. REINHARDT, M.D., Assistant in Medicine.

FRED C. BURROWS, M.D., Assistant in Medicine.

CHARLES M. COOPER, M.D., Assistant in Medicine.

CHESTER W. WOOLSEY, M.D., Assistant in Medicine.

Instruction in medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of

the methods of diagnosis, and in the rational employment of therapeutics. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and therefore properly requires a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the fourth year to place the students upon individual practical work.

### 1. Physical Diagnosis.

Dr. EBBRIGHT, Dr. REINHARDT, and Hospital Internes.

This course is given in the wards of the City and County Hospital, and consists in a review of the topographical anatomy of the viscera, in systematic instruction in inspection, palpation, percussion, auscultation, and in the adjuncts to physical diagnosis. The class is divided into sections, insuring individual instruction.

*Third year, 3 hours a week, 1 semester. 1 unit.*

### 2. Dispensary Clinics.

The class is divided into sections and the students are brought into direct contact with the patients. The students are systematically instructed in the taking of histories, in the general and special examinations of the sick, and in treatment.

*Third year, 4 hours a week throughout the year. 2½ units.*

### 3. Clinics in Internal Medicine.

Prof. KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures and demonstrations upon the abundant material in the medical ward of the City and County Hospital. Students are assigned to the beds for the study of individual cases.

*3 hours a week through 2 years. 6 units.*

### 4. Lectures on Medicine.

Prof. MOFFITT.

A systematic course of lectures on internal medicine. Purely didactic teaching is subordinated to lectures illustrated and supplemented by clinical material. Whenever possible patients are brought into the lectures. Themes are assigned to individual students, and the reports are a portion of the regular student's work.

*Third and fourth years, 2 hours a week through 2 years. 8 units.*

### 5. Bedside Instruction.

Prof. KERR, Drs. EBBRIGHT, BURROWS, COOPER, and WOOLSEY.

The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the prog-



ress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well-equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies.

*Fourth year, 2 hours per week through 1 semester.  $\frac{2}{3}$  unit.*

#### 6. Clinical Course at the Out-Patient Department.

Prof. MOFFITT.

The course consists of one clinic per week to one half the fourth year class, and one ward class session per week to sections of not more than six students. In this course the particular aspects of ambulatory material are thoroughly studied.

*Fourth year. 5-6 units.*

#### 7. Dispensary Clinics.

Drs. QUINAN and BURROWS.

The class is divided into sections, which attend the ambulatory clinics, where they are instructed in the examinations of patients, and in systematic study of internal diseases.

*Fourth year, 1 hour per week.  $1\frac{2}{3}$  units.*

### SURGERY.

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

GEORGE FRANKLIN SHIELDS, M.D., Associate Professor of the Principles and Practice of Surgery.

J. HENRY BARBAT, M.D., Instructor in Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

WALLACE I. TERRY, M.D., Instructor in Surgery.

JAMES P. H. DUNN, M.D., Assistant in Surgery.

ALFRED NEWMAN, M.D., Assistant in Surgery.

LEWIS S. MACE, M.D., Assistant in Surgery.

TRACY G. RUSSELL, M.D., Assistant in Surgery.

HAROLD JOHNSON, M.D., Assistant in Surgery.

ARTHUR L. FISHER, M.D., Assistant in Surgery.

C. G. LEVISON, M.D., Assistant in Surgery.

H. B. REYNOLDS, M.D., Assistant in Surgery.

C. M. COOPER, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years and, while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. Considerable

clinical material is found in the wards of the City and County Hospital and numerous cases of minor surgery are received in the Out-Patient Dispensary on New Montgomery street. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course. Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, at which papers are read and discussed under the guidance of the professor of surgery. A similar meeting is conducted for the third year class by one of the assistants.

**1. General Surgery.** Prof. SHERMAN and Assoc. Prof. SHIELS.

The principles of general surgery are discussed in the lectures illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

*Third and fourth years, 2 hours a week through 2 years. 8 units.*

**2. Clinical Surgery.** Prof. HUNTINGTON, and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment, and asepsis are discussed at the bedside. Especial attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anesthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

*Third and fourth years, 3 hours a week through the year. 6 units.*

**3. Surgical Pathology.** Dra. BRUNN and JOHNSON.

This course will present in a practical way the application of many of those points in the previous work in pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis,

the excretion of microorganisms by means of the lymphatics through the lungs, liver and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical.

*Third year, 12 hours a week, 9 weeks. 2 units.*

**4. Operative Surgery on the Cadaver.**

Dr. BARBAT.

The classical operations in the abdomen are performed by the students of the class individually, imitating as closely as possible the arrangement and technique of the operating room.

*Fourth year, 2 hours a week, 9 weeks.  $\frac{1}{2}$  unit.*

**5. Operative Surgery on the Cadaver.**

Dr. KUGELER.

This is an extension of Course 4, in which the surgery of the extremities is studied by practical operations on the cadaver under the same technical arrangements as in Course 4.

*Fourth year, 2 hours a week, 9 weeks.  $\frac{1}{2}$  unit.*

**6. Wound Dressing, Minor Surgery, and Bandaging.**

Dr. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

*Third year, 3 hours a week, one-half year. 1 unit.*

**7. Ward Classes.**

Drs. LEVISON, COOPER, and REYNOLDS.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

*Fourth year, 2 hours a week through 1 semester.  $\frac{2}{3}$  unit.*

**8. Surgical Dispensary.**

Drs. DUNN, LEVISON, JOHNSON, and FISHER.

This course is given upon the ambulatory material at the outpatient department and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

*Third year, 2 hours, and fourth year, 3 hours a week.  $1\frac{2}{3}$  units.*

## MICROSCOPICAL AND CHEMICAL DIAGNOSIS.

PHILIP KING BROWN, A B., M.D., Instructor in Clinical Pathology.  
HERBERT F. ALLEN, M.D., Assistant in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology, which are of assistance to the clinician in reaching a diagnosis. It aims to act as connecting link between the work of the preclinical and clinical years.

**I. Drs. BROWN and ALLEN.**

This course serves as an introduction to the students' work in practical medicine and surgery and is given almost exclusively by the laboratory method. A simple, effective, well-equipped, well-lighted laboratory accommodating one half the class is situated on the grounds of the City and County Hospital, from the wards of which material for the course is obtained. During the year routine instruction is given on the normal and pathological conditions of the blood, with thorough training in the various methods of its examination, such as the examination of fresh specimens, hemaglobin estimations, and the study of dried and stained preparations. The anemia following this and the condition of the blood in all diseases in which blood examinations tend to aid the clinician in his work are thoroughly considered. In every instance material for the class is obtained from cases in the wards. If these do not exist, specimens from the cabinet are used for purposes of instruction. Considerable time is devoted to a thorough study of the malarial blood, together with a life-history of the parasites and the modes of transmission of the diseases. The examination of the urine in various diseases forms an important part of the course, and for this purpose the newer and more effective methods are used. The examination of the sputum and feces in health and disease, together with a brief review of parasitology and the methods of diagnosis of parasitic diseases, are taken up with practical laboratory methods.

Through the courtesy of the officials at the Presidio the secretions and excretions of patients suffering from tropical diseases can be obtained for the use of the class. Considerable emphasis will be laid on this feature of the work, since the acquisition of our new insular territories has greatly increased the trade between California and the Orient, and thus renders essential the protection of the State from the introduction of various tropical diseases. This demands the thorough training of students in work of this kind.

The course concludes with a thorough analysis of the gastric secretions and contents, exudates and transudates.

*Third year, 12 hours a week, 9 weeks. 2 units.*

## OBSTETRICS.

—, Professor of Obstetrics.

ALFRED B. SPALDING, M.D., Instructor in Obstetrics.

Z. T. MALABY, M.D., Assistant in Obstetrics.

WM. P. HARVEY, M.D., Assistant in Obstetrics.

The work in the department of obstetrics is given by lectures, demonstration, and clinics. The special anatomy and physiology of the female pelvis and its contents are reviewed. Normal and pathological pregnancies, normal and pathological parturitions, and normal and pathological puerperæ are described in detail. Questions of treatment are discussed and illustrated by means of charts, manikins, and specimens.

**1. General Obstetrics.**

Drs. SPALDING and HARVEY.

Lectures and demonstrations.

*Third year, 3 hours per week throughout the year. 6 units.*

**2. Practical Obstetrics.**

Drs. SPALDING and MALABY.

In this course students are allowed to examine patients normally pregnant. Complicated cases of pregnancy and parturition are shown and discussed, their diagnosis and treatments considered. During this period the students attend cases of confinement at the City and County Hospital and patients from the out-patient department. As a rule each student sees six cases of labor. Clinical lecture and demonstration.

*Fourth year, 1 hour per week throughout the year. 1 unit.*

## GYNECOLOGY.

CHARLES A. VON HOFFMANN, M.D., Professor of Gynecology.

BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.

WILLIAM G. MOORE, M.D., Assistant in Gynecology.

Z. T. MALABY, M.D., Assistant in Gynecology.

Instruction in gynecology is given during the fourth year. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

**1. Clinics in Gynecology.** Prof. VON HOFFMANN and Dr. MOORE.

This course is given upon the material in the wards of the City and County Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course, instruction in operative gynecology is given upon the cadaver

(Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

*Fourth year, 2 hours a week throughout the year. 2 units.*

## 2. Lectures in Gynecology.

Dr. MACMONAGLE.

A systematic course of lectures, combined with recitations.

*Fourth year, 1 hour a week throughout the year. 2 units.*

## 3. Dispensary Clinics.

Prof. VON HOFFMAN, Drs. MOORE and MALABY.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

*Fourth year, 18 hours for each section.  $\frac{1}{2}$  unit.*

## ELECTIVES.

The elective clinical branches which are offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery, and orthopedic surgery. Instruction in the general aspects of the diseases of children and of the nervous system is comprised in the work of the department of medicine. This general work is, in the elective subjects of pediatrics and clinical neurology, supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the department of surgery. This general work is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose, and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature. It is the intention of the Faculty in the near future to increase the electives in the clinical as well as in the preclinical years.

## PEDIATRICS.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, M.D., Assistant in Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences and practical work in the Out-Patient Dispensary. The dispensary, located in a densely populated section of the city,

affords an extremely favorable field for the observation of the diseases peculiar to children.

### 1. Lectures and Recitations.

Prof. LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

*Fourth year, 1 hour a week throughout the year. 2 units.*

### 2. Dispensary Clinics.

Dr. BLUM.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

*Fourth year, 2 hours a week throughout the year. 1½ units.*

## DISEASES OF THE SKIN.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

A. B. GROSSE, M.D., Assistant in Diseases of the Skin.

HOWARD MORROW, M.D., Assistant in Diseases of the Skin.

### 1. Diseases of the Skin.

Prof. MONTGOMERY and Assistants.

The instruction in the department consists in:

(a) A review of the histology and microscopic anatomy of the skin.

(b) The study of the pathology and bacteriology of the various cutaneous lesions. So far as possible the instruction in this aspect of the subject is carried parallel to the clinical study of individual cases. In the event of the absence of direct clinical material bearing upon any particular disease, this plan is supplemented by the demonstration and examination of museum specimens and collected tissues.

(c) Practical work in the dermatological clinic. Instruction is founded upon the anatomy and pathology, as elucidated in the previous sections. The work is purely practical and individual; no didactic teaching is included.

*Fourth year, 2 hours a week throughout the year. 2 units.*

## CLINICAL NEUROLOGY.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

The course of instruction in diseases of the nervous system comprises lectures, clinics, demonstrations, and practical work. It is the plan of the department to introduce students into the specialized work in nervous diseases.

**1. Clinic in Neurology.**

Prof. NEWMARK.

The work in this course is entirely practical and covers the exhibition of selected dispensary cases and the training of students in the methods of conducting physical examinations on neurological cases and in testing the reactions of degeneration, sense, and perception. Patients suffering from various diseases of the nervous system are shown, questions of diagnosis and prognosis considered, followed by a discussion of the pathological lesions shown by these patients. These discussions are illustrated by numerous pathological specimens prepared by the newer neurological methods.

*Fourth year, 1 hour per week throughout the year. 1 unit.*

**DEPARTMENT OF OPHTHALMOLOGY.**

GEORGE HERMAN POWERS, M.D., Professor of Ophthalmology.

GEORGE W. MERRITT, M.D., Assistant in Ophthalmology.

CARL S. G. NAGEL, M.D., Assistant in Ophthalmology.

ANNA M. FLYNN, Assistant in Ophthalmology.

Instruction in ophthalmology is given at the City and County Hospital and at the Out-Patient Dispensary. Operative cases are shown at the hospital, while valuable material for diagnosis and treatment is obtained from the ambulatory cases at the dispensary.

**1. Ophthalmology.**

Prof. POWERS, and Drs. MERRITT, NAGEL, and FLYNN.

In this course the pathology, diagnosis, and treatment of the diseases of the eye are covered by means of lectures and practical work.

*Fourth year, 3 hours a week throughout the year, 1 lecture, 2 hours practical work per week. 3½ units.*

**OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.**

ALBERT B. MCKEE, M.D., Instructor in Diseases of the Ear, Nose, and Throat.

GARDNER PERRY POND, M.D., Assistant in Diseases of the Ear, Nose, and Throat.

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated at the clinic at the City and County Hospital.

**1. Otology, Rhinology, and Laryngology.**

Drs. MCKEE and POND.

Clinic and dispensary course.

*Fourth year, 3 hours a week throughout the year, 1 hour clinic, 2 hours practical work one-half year. 1½ units.*



# DEPARTMENT OF GENITO-URINARY SURGERY.

JOHN MARSHALL WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

JOHN C. SPENCER, M.D., Assistant in Genito-Urinary Surgery.

CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.

E. L. WEMPLE, JR., M.D., Assistant in Genito-Urinary Surgery.

Instruction in genito-urinary surgery is given at the Out-Patient Dispensary and in the wards of the City and County Hospital. In the Out-Patient Dispensary a large number of cases illustrating the various diseases of the genito-urinary tract pass under the observation of the class. Students are thoroughly drilled in the methods of diagnosis and the operative procedures required in the treatment of this class of patients. Selected cases of a graver nature are shown in the wards of the City and County Hospital, where their treatment will be carefully noted.

## 1. Genito-Urinary Surgery. Prof. WILLIAMSON and Assistants.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. A weekly clinic is also held in the wards of the City and County Hospital.

*4 hours a week throughout the year, 1 clinic per week, 3 hours practical work. 3 units.*

# ORTHOPEDIC SURGERY.

———, Professor of Orthopedic Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

JAMES T. WATKINS, M.D., Assistant in Orthopedic Surgery.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces.

*Fourth year, 3 hours a week throughout the year. 2 units.*

## SUMMER COURSES.

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In case there is a sufficient number of applicants a limited number of special courses will be given in the months following the close of the spring semester. Application must be made not later than March 15th. Courses begin April 1st.

The tuition for each of these courses is \$50.00. In addition a charge will be made for actual material consumed.

### DEPARTMENT OF ANATOMY.

For the Session of 1903-04.

#### 1. Anatomical and Histological Technique.

Prof. FLINT and Mr. MILLER.

It will be the aim of this course to give the student a general idea of all the common and many of the finer methods of anatomical and histological technique. Killing, fixation, hardening, sectioning, and staining are taken up in detail. The work is nearly all practical and the student must prepare tissues by various methods. Practical work in injecting, preservation of material, corruptions, digestion, etc., is given. Occasional lectures on the principles involved in this work are held.

#### 2. Histology, Microscopic Organology, and Neurology.

Dr. HARDESTY.

This course covers briefly the microscopic features of the simple tissues, the organs and the nervous system. Applicants who so desire may emphasize one feature of the work more than another. A comprehensive series of sections will be prepared for the student so that the maximum amount of time may be spent in the study of the tissues.

#### 3. Systematic Human Anatomy.

Dr. MOODY.

- (a) Osteology.
- (b) Head and neck.
- (c) Arm and thoracic viscera.
- (d) Leg and abdominal viscera.

This work is entirely practical, and consists of dissections carried on under the direction of the instructor. Topographical and embryological points are emphasized as they arise. Only one of subdivisions a, b, c, or d, can be taken in the six weeks allotted for this course.

**4. Special Anatomy for Physicians.**

Prof. FLINT.

The object of this course is to give an opportunity for physicians and others who desire to become familiar with the finer anatomical relations of special regions of the body, as for example, eye, ear, thoracic, abdominal, or pelvic viscera. The work is intended especially for those who contemplate work in the special fields of medicine and surgery or for those who wish to familiarize themselves with the main points of topographical anatomy.

**5. Research.**

Prof. FLINT and Dr. HARDESTY.

The laboratory will be open during the summer. A limited number of suitably trained individuals can work upon original problems in anatomy under the direction of the instructors in charge.

## DEPARTMENT OF PATHOLOGY.

**1. Special Pathology.**

Prof. TAYLOR.

A course in special branches of pathology for advanced students. A good knowledge of general pathology and experience in pathological work are a prerequisite.

**2. Chemical Pathology.**

Prof. TAYLOR.

This course contemplates the study of the chemistry of pathological processes. For this course an adequate knowledge of chemical physiology and technical experience are a prerequisite.

**3. Bacteriology.**

Dr. RYFKOGEL.

Instruction in this course is from the standpoint of general pathology and clinical medicine, the aim being to explain the general relation of the science, to illustrate the etiological relations of disease, and to equip the student and practitioner with the bacteriological procedures of diagnosis now established as necessary adjuncts to clinical medicine.

## GRADUATES, 1903.

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Adolph Baer, B.L., B.S., D.D.S.	San Francisco
Josephine Eugenia Barbat, Ph.G.	San Francisco
Paul Edward Biber, A.B.	San Francisco
René Bine	San Francisco
Louis Isidor Breitstein, B.S.	San Francisco
George De Witt Culver	San Francisco
James Alexander Ellis	Alameda
Frank Robert Girard	Oakland
Henrietta Hagan	San Francisco
James Kiah Hamilton, Jr.	Alameda
Howard Gilman Hill, A.B.	Redlands
James Raymond Hurley	San Bernardino
Joseph James Kavanagh	San Francisco
Henry Hynen Lissner	Oakland
Rudolph Ignatius Longabaugh	San Francisco
Aloysius John McKinnon	San Francisco
Thomas Reid McNab	Fillmore
Viola Ruth Olcovich, A.B.	San Salvador, Central America
Robert Galiber Reynolds, Jr., A.B.	San Francisco
Harry Philip Robarts	San Francisco
Caroline Rosenberg	San Francisco
Walter Scott Rutherford	Oakland
Earle Almeron Stone, B.L.	Oakland
David Emmet Stafford	Redwood City
Clarence Alfred Wills	Centerville

## MATRICULATES—1902-03.

## FOURTH YEAR CLASS.

Adolph Baer, B.L., B.S., D.D.S. (Univ. of Cal.).....	San Francisco
Josephine Eugenia Barbat, Ph.G. (Univ. of Cal.) .....	San Francisco
Paul Edward Biber, A.B. (Leland Stanford Jr. Univ.) .....	San Francisco
René Bine .....	San Francisco
Louis Isidor Breitstein, B.S. (Univ. of Cal.).....	San Francisco
James Warren Conlin .....	San Francisco
George De Witt Culver .....	San Francisco
James Alexander Ellis .....	Alameda
Frank Robert Girard .....	Oakland
* Robert Hilliard Goodale .....	San Pablo
Henrietta Hagan .....	San Francisco
James Kiah Hamilton, Jr. ....	Alameda
Howard Gilman Hill, A.B. (Leland Stanford Jr. Univ.)..	Redlands
James Raymond Hurley .....	San Bernardino
Madeline Johns .....	San Francisco
Daniel William Kamp .....	Petaluma
Joseph James Kavanagh .....	San Francisco
Henry Hymen Lissner .....	Oakland
Rudolph Ignatius Longabaugh .....	San Francisco
Aloysius John McKinnon .....	San Francisco
Charles Lemon McKown .....	San Francisco
Thomas Reid McNab .....	Fillmore
Mark Leonard Miner .....	San Francisco
Viola Ruth Olcovich, A.B. (Leland Stanford Jr. Univ.) .....	San Francisco
† Frank L. Putman .....	San Francisco
Robert Galihier Reynolds, Jr., A.B. (Shurtleff College, Upper Alton, Ill.) .....	San Francisco
Harry Philip Roberts .....	San Francisco
Caroline Rosenberg .....	San Francisco
Walter Scott Rutherford .....	Oakland
David Emmet Stafford .....	Redwood City
Earle Almeron Stone, B.L. (Univ. of Cal.) .....	Oakland
Sydney Vattel West, B.S. (Univ. of Cal.) .....	San Francisco
Clarence Alfred Wills .....	Centerville

\* Special student. † Degree granted December 20, 1902.

## THIRD YEAR CLASS.

Morgan Dillon Baker, Jr.	San José
Maurice Lowell Baum	Livermore
Edward Emery Baumeister, Ph.G. (Univ. of Cal.)	San Francisco
Edith Sara Brownail, B.L. (Univ. of Cal.)	Alameda
Paul Castelhun, B.S. (Univ. of Cal.)	San Francisco
John Nolan Chain	San Francisco
Palmer Howard Dunbar, D.D.S. (Univ. of Cal.)	San Francisco
David Albert Ewing	Seattle, Washington
Arthur Wellesley Foshay, A.B. (Albany College)	Albany, Oregon
George Asa Harker	Mill Valley
Morton Edwin Hart	San Francisco
Robert Hector, Jr.	Loomis
Foster Melanchthon Hoag	Booneville
*Louis Clive Jacobs, Ph. G. (Univ. of Cal.)	San Francisco
Henning Koford	East Berkeley
Louise Adra Linscott, B.L. (Univ. of Cal.)	Berkeley
Clarke Loring McClish, B.S. (Univ. of the Pacific)	College Park
Pernier Albert Mix	Berkeley
Robert Julian Nicholls	Berkeley
Stuart Zeno Peoples	Petaluma
Oscar Charles Reeve	Berkeley
John Peter Sandholdt	Watsonville
Jacob Schwarz	San Francisco
John Francis Slavich	Oakland
Eugene Kneeland Smith	Grass Valley
Fred Hugh Van Tassell	Glendora
Wilhelm Waldeyer	San Francisco
Henry Claud Warren	San Francisco
Hannah Ellen Webster	San José

## SECOND YEAR CLASS.

Marc Abrams	San Francisco
George Cummings Albee, B.S. (Beloit College)	Berkeley
Edgar William Alexander, B.S. (Univ. of Cal.)	Oakland
Coniah Leigh Bigelow, B.S. (Univ. of Cal.)	San Francisco
James Clark Blair, A.B. (Univ. of Cal.)	San Francisco
Constantine Raphael Bricca, A.B. (St. Ignatius College)	S. F.
George A. Briggs	Elk Grove
William Franklin Cothran	San José
Ambrose Franklin Cowden	Forest Hill
Antonio Menotti dal Piaz	Berkeley
Mary Tom De Haven	San Francisco

\*Special student.

Samuel Percy Hardy.....	Oakland
Harriette Buttler Harker, A.B. (Vassar College).....	Mill Valley
† Wilfred Bertram Hays.....	Petaluma
Herman Verplanck Hoffman, A.B. (Santa Clara College).....	San José
William Kenny.....	Sespe
† Herman Kronenberg, Ph.G. (Univ. of Cal.).....	San Francisco
John William Peck.....	Oakland
Louis Xavier Ryan, A.B. (St. Ignatius College).....	San Francisco
George Samuel Snyder.....	San Francisco
Gifford Lyne Sobey, A.B. (Leland Stanford Jr. Univ.).....	S. F.
Eldridge Curtis Turner.....	Sacramento
John Irving Vickerson.....	Lodi

## FIRST YEAR CLASS.

Alexander Adler, B.S. (Univ. of Cal.).....	San Francisco
*Frederic John Blackburn, Ph. G. (Univ. of Cal.).....	Paso Robles
Albert Bonilla, A.B. (Liceo de Costa Rica National Institute) ..	S. F.
Olive Violet Brasier.....	San Francisco
*Alice Gregory Bush.....	Berkeley
† Lewis Eugene Carpenter, B.S. (Univ. of Cal.).....	San Francisco
*John Aloysius Clark, A.B. (Santa Clara College).....	Gilroy
Sidney Ray Dannenbaum.....	San Francisco
*Cornelius Thomas Devine, A.B. (Santa Clara College) ..	Berkeley
Louis Halford Earle.....	Berkeley
William Cooper Eidenmüller.....	Berkeley
Ralph Falk.....	Boise, Idaho
Mattie Anna Feeley.....	San José
John Henry Franklin.....	Gilroy
*Josephine Julia Gil.....	Oakland
Georgie Mary Hood.....	San Francisco
George Graham Hunter.....	Bakersfield
Louise Mary Igo.....	Sacramento
Charles Breckenfeld Jones.....	Sacramento
David Joseph Mahan.....	Eureka, Cal.
Earl Emmet Ostrom.....	Marysville
Richard Leon Ochsner.....	Sacramento
Waid James Stone.....	San Francisco
† Leo Lloyd Sexton.....	Washington
Charles Edison Swezy.....	Marysville
† Gustave Herman Taubles.....	San Francisco
Jackson Temple, Jr., Ph.G. (Univ. of Cal.).....	Santa Rosa
Frederic Homer Todd.....	San Francisco
Joseph Thomas Wrenn.....	Placerville
Reuben Sylvester Zumwalt.....	Yuba City

\* Not in regular attendance. † Special student.

UNIVERSITY OF CALIFORNIA

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ANNUAL ANNOUNCEMENT

OF

COURSES OF INSTRUCTION

IN THE

MEDICAL DEPARTMENT

FOR THE ACADEMIC YEAR

1904-1905





Letters of inquiry concerning the Medical Department should be addressed to Dr. A. A. D'ANCONA, Dean, Medical Department, University of California. San Francisco, Cal.



CALENDAR.

1904.

- Aug. 12, Friday... Academic year in the Medical and Academic Departments begins.
- Aug. 12, Friday.. } ..... Entrance examinations at Berkeley for the Medical and Academic Departments.
- Aug. 16, Tuesday. }
- Aug. 8, Monday } ..... Examination of conditioned students of advanced classes.
- Aug. 13, Saturday }
- Aug. 11, Thursday } ..... 10 A. M. to 2 P. M. At Medical Department. Applications for admission to the Medical Department; filing of credentials from accredited high schools and colleges; registration of students of all the classes of the Medical Department; payment of fees.
- Aug. 12, Friday }
- Aug. 13, Saturday }
- Aug. 15, Monday..... Class work begins.
- Aug. 17, Wednesday..... 11 A. M. Opening exercises.
- Sept. 9, Friday..... Admission Day—a holiday.
- Nov. 24, Thursday..... Thanksgiving Day—a holiday.
- Dec. 22, Thursday..... Christmas vacation begins.

1905.

- Jan. 5, Thursday..... Second term begins.
- Feb. 22, Wednesday..... Holiday.
- April 3, Monday..... Summer course in histology, anatomy, physiology, pathology, and bacteriology for graduates and advanced students.
- May 1, Monday..... Examinations begin.
- May 13, Saturday..... Term ends.

## REGENTS OF THE UNIVERSITY.

## EX-OFFICIO REGENTS.

- HIS EXCELLENCY GEORGE C. PARDEE, - - - - Sacramento  
*Governor, ex-officio President of the Regents.*
- HIS HONOR ALDEN ANDERSON, - - - - Suisun  
*Lieutenant-Governor.*
- HON. THOMAS JEFFERSON KIRK, - - - - Sacramento  
*Speaker of the Assembly.*
- HON. THOMAS J. KIRK, - - - - Sacramento  
*State Superintendent of Public Instruction.*
- BENJAMIN RUSH, - - - - Suisun  
*President of the State Agricultural Society.*
- R. J. TAUSSIG, - - - - 26 Main St., San Francisco  
*President of the Mechanics' Institute.*
- BENJAMIN IDE WHEELER, *Ph.D., LL. D.*, - - - -  
 - - - - 1820 Scenic Ave., Berkeley  
*President of the University.*

## APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

Name.	Address.
ISAIAS WILLIAM HELLMAN, Esq.,	Nevada Nat'l Bank, S. F.
CHESTER ROWELL, M.D., - - -	Fresno.
HON. JAMES A. WAYMIRE, - -	Alameda.
HON. CHARLES WILLIAM SLACK, Ph.B., LL.B.,	309 Montgomery St., S. F.
JACOB BERT REINSTEIN, M.A., -	217 Sansome St., S. F.
JOHN ELIOT BUDD, A.B., - - -	Stockton.
MRS. PHOEBE A. HEARST, - - -	Pleasanton.
ARTHUR W. FOSTER, Esq., - - -	Mutual Life Bldg., S. F.
C. N. ELLINWOOD, M.D., - - -	2739 Pacific Avenue, S. F.
GARRETT McENERNEY, LL.B., -	Nevada Block, S. F.
CHARLES STETSON WHEELER, A.B.,	532 Market St., S. F.
GUY C. EARL, A.B., - - - -	12 McClure St., Oakland.
HON. JAMES WILFRED MCKINLEY, B.S.,	Los Angeles.
REV. PETER CHRISTOPHER YORKE, S. T. L.	1267 16th Ave., Oakland.
JOHN ALEXANDER BRITTON, Esq.,	Rialto Bldg., S. F.
FREDERICK WM. DOHRMANN, Esq.,	124 Sutter St., S. F.

FACULTY.

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- BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University. ex-officio President of the Faculty.
- ARNOLD A. D'ANCONA, A.B., M.D., Dean.
- ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and Operative Surgery.
- GEORGE H. POWERS, A.M., M.D., Professor of Ophthalmology.
- WM. WATT KERR, A.M., M.B., C. M., Professor of Clinical Medicine.
- DOUGLASS W. MONTGOMERY, M.D., Professor of Dermatology
- JOHN M. WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.
- HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.
- ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.
- CHAS. A. VON HOFFMANN, M.D., Professor of Gynecology.
- HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and Practice of Medicine.
- JOSEPH MARSHALL FLINT, B.S., A.M., M.D., Professor of Anatomy.
- WM. B. LEWITT, M.D., Professor of Pediatrics.
- JACQUES LOEB, M.D., Professor of Physiology.
- THOS. W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.
- LEO NEWMARK, M.D., Professor of Clinical Neurology.
- FRANK T. GREEN, Ph.G., Associate Professor of Physiological Chemistry.
- GEO. F. SHIELDS, M.D., F.R.C.S.E., etc., Associate Professor of the Principles and Practice of Surgery.
- MARTIN H. FISCHER, M.D., Assistant Professor of Physiology.
- IRVING HARDESTY, A.B., Ph.D., Assistant Professor of Anatomy.
- BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.
- CHARLES L. MORGAN, A.B., Ph.G., M.D., Lecturer on Materia Medica.

- J. HENRY BARBAT, Ph.G., M.D., Instructor in Surgery.  
SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.  
RICHARD M. H. BERNDT, M.D., Instructor in Therapeutics.  
HENRY A. L. RYFKOGEL, M.D., Instructor in Pathology.  
HAROLD BRUNN, M.D., Instructor in Surgery.  
CLARENCE QUINAN, M.D., Instructor in Medicine.  
GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
WALLACE I. TERRY, M.D., Instructor in Surgery.  
PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.  
ALFRED B. SPALDING, M.D., Instructor in Obstetrics.  
ALBERT B. MCKEE, Ph.M., M.D., Instructor in Diseases of Ear, Nose and Throat.  
HENRY B. A. KUGELER, M.D., Instructor in Surgery.  
SANFORD BLUM, A.B., M.D., Instructor in Pediatrics.  
GARDNER P. POND, M.D., Instructor in Otology, Laryngology and Rhinology.  
ROBERT ORTON MOODY, B.S., M.D., Assistant in Anatomy.  
FRED GRANT BURROWS, A.M., M.D., Assistant in Medicine.  
CHAS. M. COOPER, M.R.C.S. Eng., Assistant in Medicine.  
ALFRED NEWMAN, A.B., M.D., Assistant in Surgery.  
CHAS. G. LEVISON, M.D., Assistant in Surgery.  
JOHN C. SPENCER, M.D., Assistant in Genito-Urinary Surgery.  
CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.  
GEORGE H. RICHARDSON, M.D., Assistant in Genito-Urinary Surgery.  
GEORGE W. MERRITT, M.D., Assistant in Ophthalmology.  
HOWARD MORROW, M.D., Assistant in Dermatology.  
JOHN BRUCE MACCALLUM, A.B., M.D., Assistant in Physiology.  
GEORGE S. BULLOT, M.D., Assistant in Physiology.  
CHESTER H. WOOLSEY, B.S., M.D., Assistant in Medicine.  
LEWIS S. MACE, A.B., M.D., Assistant in Surgery.  
TRACY G. RUSSELL, A.B., M.D., Assistant in Surgery.  
WILLIAM G. MOORE, M.D., Assistant in Gynecology.  
E. L. WEMPLE, JR., M.D., Assistant in Genito-Urinary Surgery.  
CARL S. G. NAGEL, M.D., Assistant in Ophthalmology.  
JAMES T. WATKINS, M.D., Assistant in Surgery.  
HAROLD JOHNSON, M.D., Assistant in Surgery.  
ARTHUR L. FISHER, M.D., Assistant in Surgery.  
HERBERT ALLEN, A.B., M.D., Assistant in Clinical Pathology.  
ANNA M. FLYNN, M.D., Assistant in Ophthalmology.

## LOCATION.

The Medical Department is located in the western part of San Francisco, at Second and Parnassus Avenues, south of Golden Gate Park. The main building has a frontage of 148 and a depth of 208 feet. Upon the ground floor are the students' lockers, the photographic and projection rooms, the anatomical preparation room, the laboratory of materia medica, storage rooms, janitor's quarters, and lavatories. Situated upon the second floor are the offices of administration, the library, the students' room, the laboratory of physiology, the laboratory of chemical pathology, and the private laboratories of pathology. The laboratories of chemical physiology, histology, morphological pathology and bacteriology, and a lecture room are upon the third floor, while the fourth contains eight dissecting rooms, the bone room, the anatomical museum and model collection, the private laboratories of anatomy and a lecture room.

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## ADMISSION.

Students wishing to matriculate are required to undergo examinations for admission, with the following exceptions, viz.:

1. Applicants who present certificates of having successfully passed the examination for admission to the College of Letters or the Colleges of Science of the University of California, or some other recognized University or College.
2. Applicants who present diplomas or certificates of graduation from the University of California, or of some other recognized University or College.
3. Applicants who present diplomas or certificates of graduation from accredited High Schools and Academies.
4. Applicants who present diplomas or certificates of graduation from a State Normal School of California, or of any other State or Territory.



## ADMISSION ON EXAMINATION.

## Times, Places, and Subjects of Examination.

Entrance examinations are held in August and in January of each year; but the examinations in January are primarily for the purpose of enabling students in the University to remove deficiencies incurred in previous entrance examinations. Applicants for admission who present certificates from their teachers that they are prepared in the subjects they offer will be admitted to the January examinations. Such certificates must be filed with the Recorder of the Faculties, Berkeley, before the examinations.

In 1904 examinations will be held in Berkeley, August 12-16. The University may conduct entrance examinations at the same time in any city or at any school where the number of candidates and the distance from other places of examination may warrant it. Applications for this purpose should be sent to the Recorder of the Faculties, Berkeley, by mail, not later than June 1.

After passing the entrance examinations students who do not register in the office of the Dean of the Medical Department by September 1st will be denied admission to regular class standing unless they obtain special permission from heads of the departments in which they begin their work.

Matriculants who do not present satisfactory credentials are required to pass the examinations in the subjects named below. Subjects 1, 2, 3, 4, 5, 6a, b, and c; 11; 8 or 14 or 15a<sup>2</sup>, or 15b<sup>2</sup>, and either 10 and 13a or two of the main subdivisions (a, b, c, d) of 12\*.

A. **Oral and Written Expression.** Training in this subject enters into the proper treatment of all topics of study taken up in the school course, and extends to speaking and oral reading as well as to writing. Its aim is to secure to the student the ability to use his mother-tongue correctly, clearly, and pertinently on all lines upon which his thought is exercised.

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\*Subjects are numbered to correspond with those of the general list of preparatory subjects for admission to the Colleges at Berkeley. The amount of work represented by each of the subjects is as given in the General List of Preparatory Subjects in the Register of the University.

A written test in this subject is required of all applicants for the status of Special Student in the Colleges of Letters, Social Sciences, Natural Sciences, and Commerce, excepting only those who hold teachers' certificates. In the case of other applicants, examination will be conducted in connection with English 1 and 14, and note will be made of correctness of form and adequacy of expression in the various papers written for other departments.

1. **English.** (2 units.) Until January, 1907, applicants may present the items as announced in 1901.<sup>†</sup> After that the examination will presuppose thorough acquaintance with the following works, together with the practical knowledge of grammar and the fundamental principles of rhetoric implied in such acquaintance: (1) *The Lady of the Lake*; (2) *Ivanhoe* or *The Alhambra*; (3) The best Ballads, Heroic Lays, and Poems of Nationality—in all about 1,500 lines; (4) Classic Myths; (5) The following poems: *The Deserted Village*, *The Cotter's Saturday Night*, *Tam O'Shanter*, *The Ancient Mariner*, *The Prisoner of Chillon* (or Selections from *Childe Harold*), *Horatius*, *Snow-Bound*; (6) *The Merchant of Venice*; (7) *Julius Cæsar*; (8) Essays and Addresses: Emerson's *The Fortune of the Republic*, *The American Scholar*; Lowell's *Democracy*, *Lincoln* (two for study; one for reading\*).

While the examination at the University will be upon the subjects as stated above, accredited schools may, after consultation with the English Department, avail themselves of the following considerably enlarged list of substitutions: for (1),

†1. **English.** (2 units.) The examination in this subject will presuppose thorough acquaintance with the following works, together with the practical knowledge of grammar and elementary rhetoric implied in such acquaintance: (1) *The Lady of the Lake*; (2) *The Alhambra*; (3) *Sir Roger de Coverley*; (4) Classic Myths; (5) Short Poems: *Horatius*, *The Deserted Village*, *The Cotter's Saturday Night*, *The Prisoner of Chillon* (or Selections from *Childe Harold*), *Winter*, *Winter Morning Walk*, *Snow-Bound*, *Tam o' Shanter*, *The Ancient Mariner*, *L'Allegro*, and *Il Penseroso*; (6) *The Merchant of Venice*; (7) *Julius Cæsar*; (8) *Macaulay's Warren Hastings*.

While the regular examinations will, for the present, be upon these subjects without option, schools on the accredited list of the University may, after consultation with the English Department, make such substitutions as the following: for (1), *The Lay of the Last Minstrel*; for (2), *Tom Brown at Rugby*, or *Ivanhoe*; for (3), Addison's Select Essays; for (5), some twelve poems of similar scope and character; for (6) or (7), *Macbeth*. \*Items marked "for reading" are not for class-recitation, but for perusal outside of school with reports or discussions in class.

The Lay of the Last Minstrel; for (2), any one of these—Scott's *Quentin Durward*, *Kenilworth*, *Woodstock*, *Rob Roy*, *Tales of a Grandfather*, Irving's *Sketch-Book*, his *Tales of a Traveler*, Hawthorne's *The House of Seven Gables*, Tom Brown at Rugby, *Gulliver's Travels*, *Don Quixote*; for (3), an equivalent amount of purely literary selections from the Bible (e. g., *Genesis*, *Exodus*, *Ruth*, *Esther*), or the *Pilgrim's Progress*; for (4), *Classic Myths* (two thirds), and, for the remaining one third, *Biblical Selections* (as above), or the *Classics in English translations*; if the latter be chosen, the following options are open: (a) *The Iliad*, books I, VI, XXII, and XXIV (Pope, Chapman, Lang, Bryant, and others), or (b) *The Odyssey*, any four books (preferably the Episode of Ulysses among the Phæacians), or (c) Two of the following Greek dramas: *Antigone*, *Alcestis*, *Iphigenia*; for (5), short poems of similar scope and character; for (6), *As You Like It*, *Midsummer Night's Dream*, *Twelfth Night*, *The Tempest*; for (8), an equivalent amount in the best prose explanatory of American ideals of citizenship, such as: Washington's Inaugural of 1789; Jefferson's of 1801; Everett on Franklin, Washington, *The Pilgrim Fathers*; Choate on American Nationality, Daniel Webster; Sumner on the Scholar; Curtis on the Puritan Spirit, *The Public Duty of Educated Men*; Bryce on *The Strength of American Democracy* (*American Commonwealth*, Chapter XCIX).

**2. Arithmetic.** No examination in this subject will henceforward be set, since the study comes regularly in the grammar school, and since its essential processes are involved in Algebra.

**\*3. Algebra.** (1 unit.) Through simple quadratic equations; namely, the various methods of factoring, the remainder and the factor theorems, the theory of exponents,

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once a week or fortnight. The examination upon such items will not presuppose acquaintance with minute details. Whatever credit the pupil may acquire by his answers will be applied to offset deficiencies in other respects, or still further to improve his standing.

\*A suggested programme for mathematics in High Schools offering two, three, or four years of mathematical study:

1. Minimum requirement: Subjects 3, 4, simultaneously, second and third years.

2. Medium requirement: Subjects 3, 4, simultaneously, second and third years; Subjects 12a<sup>1</sup>, 12a<sup>2</sup>, in fourth year.

3. Maximum requirement: Subjects 3, 4 in first and second

the calculus of radicals, simultaneous equations of the first degree with problems involving their solution, simple quadratic equations.†

4. **Plane Geometry.** (1 unit.) Including the general properties of regular polygons; their construction, perimeters, and areas; and the different methods for determining the ratio of the circumference to the diameter.

5. **History and Government of the United States.** (1 unit.) A knowledge of the outline of American History, and of the nature of Federal, State, and local government. This requirement represents three things: the regular use by the pupil of a text in history, such as Channing's *Students' History of the United States*, McLaughlin's *History of the American Nation*, or Montgomery's *Students' American History*, and a text in government such as Hinsdale's *American Government*, Ashley's *American Federal State*, or Bryce's *American Commonwealth* (1 vol. edition); systematic reading of assigned references; and the preparation of a note-book containing maps, concise topical outlines or summaries of the most important movements or institutions, notes on some of the reference readings, and a few carefully prepared brief papers with bibliographical notes.‡

6. **Elementary Latin.** (2 units.) (a) Translation of easy prose into English. (1 unit.) The examination will cover the translation into idiomatic English of the subject-matter and implied grammar of selected passages from Cæsar's *Gallie War*, books I-IV; but accredited schools may use any equivalent Latin text (or the matter contained in the *Second-Year books*), and are encouraged to increase the amount of reading indicated, by adding work from *Gradatim*, *Viri Romæ*, *Nepos*, or other books of Cæsar. There should be some training in translation at sight from easy authors.

(b) Translation of simple English into Latin prose. (1

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years; Subjects 12a<sup>1</sup>, 12a<sup>2</sup> in third year; Subjects 12a<sup>3</sup>, 12a<sup>4</sup> in fourth year.

†Candidates who offer the old requirements for admission must include in Subject 3 ratio and proportion, the theory of quadratic equations, the solution of equations reducible to quadratic form, simultaneous quadratic equations, and problems involving their solution. These topics will ultimately be included in 12a<sup>3</sup> (Advanced Algebra).

‡The mention of any book does not mean that the University or the Department of History recommends it.

unit.) This requirement presupposes familiarity with the usual forms and ordinary constructions of the language. Continued training in translating detached sentences illustrative of constructions, and of connected sentences based on Cæsar or an equivalent author, together with a thorough grammatical drill on the work read, is a proper preparation for satisfying this requirement.

**7. Advanced Latin.** (2 units.) Translation of Latin of average difficulty, and of English narrative into Latin prose.

(a) Third year Latin. (1 unit.) The examination will include the translation into idiomatic English of average passages from Cicero's Orations against Catiline, for Archias, and for Pompey's Military Command, and a selection from some other speech of Cicero to test ability in sight translation. The examination will also include questions on the usual forms and ordinary constructions of the language and on the subject-matter of the authors read. Accredited schools may read any equivalent Latin prose text, and are urged to add to the minimum outlined above Sallust's Catiline and additional orations of Cicero. The English passage offered for translation into Latin (*c*<sup>1</sup>) will be a paraphrase from one of Cicero's orations, and this requirement calls for systematic training in Latin prose composition in connection with the reading.

(b) Fourth year Latin. (1 unit.) The examination will be based upon Virgil's *Æneid*, books I-VI; and with the addition of prosody, the scope of the examination will be similar to that outlined above for the Third year work. But the examination in Latin composition (*c*<sup>2</sup>) will be connected discourse, based on Ciceronian Latin, and schools may also well give attention to the thorough grammatical review provided for in the best manuals of Latin composition. The stronger schools are urged to add to the *Æneid*, the *Eclogues* or *Georgics*, or some reading in Ovid. The test for translation at sight will be from poetry and not from prose.

NOTE.—Students may be recommended in 7a with the valuation of  $\frac{1}{2}$  unit, 7b  $\frac{1}{2}$  unit, and either division of 7c (composition)  $\frac{1}{2}$  unit.

**8. Greek.** (2 units.) (a) Greek Grammar, including accents, the ordinary inflectional forms, the simpler rules of

syntax, and the translation of easy English sentences into Attic Greek. White's or Ball's First Greek Book represents the amount of preparation required.

(b) Xenophon's *Anabasis*, books I-IV, with questions on the syntax and subject-matter. The translation into Attic Greek of simple passages of connected narrative based on the *Anabasis*. [Parts I and II of Pearson's Greek Prose Composition represents the nature and amount of preparation required.]

**10. Ancient History and Geography. (1 unit.)**

(a) Greek history to the Roman Conquest, with the connected geography.

(b) Roman history to A.D. 800, with the connected geography.

Botsford's *History of the Orient and Greece* (or *History of Greece*), Botsford's *History of Rome*, Swoboda's *Greek History*, Myers' *Rome, its Rise and Fall* (last edition), Morey's *Outline of Roman History*, will serve to indicate the amount required.\* In connection with the text-book, the pupils are expected to acquire facility in making concise, logical outlines, and to embody some of these, with a few maps and evidences of collateral reading, in a note-book.

**11. Physics. (1 unit.)** The requirement represents at least a daily exercise during one school year, which falls within the last two years of preparation for college. It is expected that the ground covered will include fair representation of primary empirical laws from each of the main subdivisions of Physics.

The results called for demand vigorous and thorough instruction in the class-room, based upon laboratory exercises by the pupils and other experimental illustrations. In addition to the test of a written examination, it will be required that each candidate submit a laboratory note-book, signed by his teacher, as evidence that the main principles of the subject as treated have been presented experimentally. The following form of certificate is suggested as a definite statement of what is vouched for by the teacher's signature:

I hereby certify that these notes represent actual laboratory

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\*The mention of any book does not mean that the University or the Department of History recommends it.

results obtained by [Insert name of pupil]. This statement applies to experiments numbered [Insert the numbers], entered upon pages [Insert the page-numbers] of this record.

Signed, [Teacher's Name.]

Dated at.....19..

*It is requested that this certificate be entered upon the last page of the student's laboratory record.*

## **12. Advanced Mathematics, Chemistry, Botany, Zoology, Physical Geography.**

**12a. Advanced Mathematics.** (1 unit.) Any two of the following: (1) *Solid Geometry*. The fundamental propositions of solid and spherical geometry, accompanied by a suitable amount of exercise in problems—the whole to represent the work of one half-year. (2) *Plane Trigonometry*. The development of the general formulæ of plane trigonometry, with applications to the solution of plane triangles and the measurement of heights and distances. (3) *Advanced Algebra, Part I*. Surds and complex quantities, ratio, proportion and variation, arithmetical, geometrical, and harmonic progressions, examples of other simple series, determinants, and elements of the theory of equations, including the solution of numerical equations by Horn's Method. (4) *Advanced Algebra, Part II*. Inequalities, limits, and indeterminate forms, exponentials and logarithms, natural logarithms, convergency and divergency of series, indeterminate coefficients with applications to integral functions, partial functions, expansion of functions, and summation of series, permutations and combinations, the binomial theorem for any index, exponential and logarithmic series, logarithmic computation.

**12b. Chemistry.** (1 unit.) This requirement represents five exercises a week for one year. Laboratory work is essential, and as much time as possible should be devoted to it. Much of the time should be spent in acquiring fundamental principles, omitting as much as possible the analytical work. A note-book should be kept and presented at the time of the examination in Berkeley.

**12c. Botany.** (1 unit.) A knowledge of the morphology and simpler physiology of the higher plants is required. This should be based upon a full year of practical work in the

laboratory and to some extent, also, in the field. Careful attention should be paid to the recording of observations, by notes and drawings, together with the drawing of correct inferences from the observations. It is desirable that the pupils become familiar with the easier orders of flowering plants represented in the local flora. Bergen's Elements of Botany (Pacific Coast Edition), Spaulding's Introduction to Botany, Setchell's Laboratory Practice for Beginners, and Jepson's Flora of Western Middle California, indicate both the scope and the method of the work.

**12d. Zoology.** (1 unit.) To consist in the actual study of animals, and recitations, the practical work to be the center of the preparation. The practical work should be partly in the laboratory and partly in the field. The chief aim of the examinations in the subject will be to determine how closely and accurately pupils have observed. Guides for study: Harvey's Introduction to the Study of Zoology; Colton's Practical Zoology; Needham's Elementary Lessons in Zoology; Davenport's Introduction to Zoology; or Dodge's Introduction to Elementary Practical Biology. Jordan and Kellogg's Animal Life should be available for collateral reading.

**12c. Physical Geography.** (1 unit.) A course designed to cultivate habits of observation, comparison, and reflection; requiring a practical acquaintance with common natural phenomena and the processes which underlie them. It should embrace experimental and field investigation of as many of the topics in the following list as may be practicable:

(1) The adjacent country. The general surface features of the country accessible to the pupils; hills, plains, valleys, streams, lakes, marshes, bays, verdure.

(2) Soils. Their variable character, composition, and derivation.

(3) Commonly occurring minerals. Their distinguishing characteristics.

(4) Rocks. Their character as aggregations of minerals and their broad distinction into aqueous and igneous.

(5) Plants. Their subdivision into broad types. Their relations to soil, water, and atmosphere.

(6) Animals. The distinguishing characters of the different classes, their habits, elements of comparative anatomy.



(7) The atmosphere. Its weight, composition, movements, temperature, and humidity; the formation of clouds and rain and the development of storms. Precipitation of moisture. The reaction of the atmosphere upon animal and plant life and its control of man's environment; its relation to forestry and irrigation.

(8) Streams. Their sources, character, and quantity of water; the lands through which they flow; their grades and corrosive action; their transportation and deposition of the waste of the land; their relation to lakes; underground waters. Glaciers.

(9) The earth. Its size, weight, and relation of land and water areas; its relief; its seasons; the distribution of heat and humidity over the earth's surface and its evolution; the relation of relief and climate to the distribution of plants and animals. Man's adaptation to his environment.

(10). The ocean. The salinity and temperature of its waters and the variation of these; its currents, tides, and waves; shore topography; relation of ocean currents to temperature and humidity of atmosphere.

(11) The cosmos. The real and apparent movements of the heavenly bodies.

So far as practicable the pupil should work without a text. For teachers' use the following books are recommended: Physical Geography, Dryer; Physical Geography, Gilbert and Brigham; Physical Geography, Davis; Elementary Physical Geography, Tarr.

**13a. Mediaeval and Modern History.** (1 unit.) Myers' Mediaeval and Modern History will indicate the period to be covered and the amount required.\*

**13b. English History.** (1 unit.) From the earliest times to the middle of the nineteenth century. Larned's History of England indicates approximately the amount required.\*

**14. English.** Until January, 1905, applicants may present themselves for examination on this subject as a whole and as announced in 1901;† or (if credit for only one unit is de-

\*The mention of any book does not mean that the University or the Department of History recommends it. For suggestions as to note-books, etc., see notes under subjects 5 and 10. The proportions of the elements of the note-books must be varied to suit the previous training of the class.

†14. English. (2 units.) The examination in this subject will

sired) on any selection from the items of that subject which may be equivalent to one-half of it. After that date the subject will be divided as below. The examination both in 14a and 14b will presuppose a thorough acquaintance with the works covered as regards organization of thought and its development, style, metrical structure, place in literary history, life of the author, and relation to the age.

14a. (1 unit.) (1) Tennyson's *Idylls of the King* (for careful study. The *Passing of Arthur*; for *reading*,† with occasional reports in class, two of the following: *The Holy Grail*, *Elaine*, *Guinevere*, *Enid*, *Gareth and Lynette*); (2) Lowell's *The Vision of Sir Launfal*, and the *Commemoration Ode*; (3) Macaulay's *Clive* or *Warren Hastings* (for *reading*\*); (4) *Henry Esmond*, or *Silas Marner* and the *Vicar of Wakefield*; (5) Milton's *L'Allegro*, *Il Penseroso*, and *Comus*; (6) *Sir Roger de Coverley*.

While the regular examination will be confined to these items, accredited schools may, after consultation with the English Department, make such substitutions as the following: For (1), Similar selections from the poetry of chivalry,

presuppose thorough acquaintance with the works named below, as regards organization and development of thought, as regards style and metrical structure, and as regards their relation to the author and his age: (1) *Burke's Speech before the Electors at Bristol*; *Macaulay's First Speech on the Reform Bill*; *Webster's Reply to Hayne*; (2) *Poems*, lyrical, reflective, didactic, and satirical; Milton's *Comus*, *Lycidas*, and *Sonnets II, XVI, XIX, XXII*; *Dryden's Alexander's Feast*; *Pope's Rape of the Lock*; *Gray's Elegy and The Bard*; *Keats' The Eve of St. Agnes and The Nightingale*; *Shelley's The Cloud and The Skylark*; *Wordsworth's Tintern Abbey*, *Laodamia*, *Ode on the Intimations of Immortality*, and *Ode to Duty*; *Lowell's The Vision of Sir Launfal*; *Browning's A Transcript from Euripides (In Balaustion's Adventure)*; *Tennyson's The Passing of Arthur*; *Chaucer's Prologue to the Canterbury Tales*; (3) *Thackeray's The Newcomes*.

While the regular examination will be confined to these subjects, schools on the accredited list of the University may, after consultation with the English Department, make such substitutions as the following: For (1), any three oratorical masterpieces of argument (including one of *Burke's*); for the *Rape of the Lock*—the *Essay on Man*, or *Dryden's The Character of a Good Parson*, *Pope's Epistles to Jervas and Boyle*, and *Johnson's The Vanity of Human Wishes*; for *Chaucer's Prologue to the Canterbury Tales*—selections from *Clough and Arnold*; for *The Vision of Sir Launfal*—*Tennyson's Enid*, or his *Gareth and Lynette*; for *Comus*—*Paradise Lost*, Book 1, or 2, or 5, or 6; for (3), *Silas Marner* and the *Vicar of Wakefield*, or *Henry Esmond*.

†See note under English 1.

\*See note under English 1.

or *The Princess*; for (3), *The Second Essay on the Earl of Chatham*; for (4), One of the following: *The Newcomes*, *Adam Bede*, *The Mill on the Floss*, *Romola*, *Tale of Two Cities*, *David Copperfield*, *Nicholas Nickleby*, *Our Mutual Friend*, *Oliver Twist*, *The Cloister and the Hearth*; for (5), *Comus*,—*Paradise Lost*, Book 1, or 2, or 3, or 6; for (6), an equivalent amount from Addison's *Select Essays*, the *Essays of Elia*, the *Autocrat of the Breakfast Table*, *Stevenson's Virginibus Puerisque*, or *Burrough's Essays* or *Warner's Back-log Studies*, or *Curtis' Prue and I*.

14b. (1 unit.) (1) *Arguments and Orations*: *Burke's Speech before the Electors at Bristol*; *Macaulay's First Speech on the Reform Bill*; *Webster's Reply to Hayne*; (2) *The Essay*, literary or ethical; *Carlyle's Essay on Burns*, or *Emerson's Compensation and Self-Reliance* (for *reading*,\* with occasional reports in class); (3) A general outline of English Literature, illustrated by the study, in chronological order, of *Chaucer's Prologue to the Canterbury Tales*; *Shakespeare's Macbeth* (reading and reports); *Milton's Lycidas and Sonnets II, XVI, XIX, XXII*; *Gray's Elegy*; *Wordsworth's Tintern Abbey*, *Ode on the Intimations of Immortality*, and *Ode to Duty*; *Keats' Eve of St. Agnes* and *The Nightingale*; *Shelley's The Cloud and The Skylark*; *Browning's A Transcript from Euripides* (in *Balaustion's Adventure*); *Arnold's Scholar-Gypsy* (or *Balder Dead*); *Tennyson's Oenone*.

Schools on the accredited list may, after consultation with the English Department, make such substitutions as the following: For (1), any three oratorical masterpieces of argument (including one of *Burke's*); for (2), *literary*: one of the following: *Carlyle* or *Macaulay on Boswell's Life of Johnson*, an equivalent in *Boswell's Life*, *Macaulay's Addison* ( $\frac{1}{2}$ ) and *Milton* ( $\frac{1}{2}$ ), an equivalent from *Lowell's Literary Essays*, such as his *Chaucer*, or from *Arnold's*, such as his *Preface to the Poems of Wordsworth* ( $\frac{1}{2}$ ), and his *Emerson* ( $\frac{1}{2}$ ), *Ruskin's Sesame*, *Harrison's Choice of Books*; *ethical*: an equivalent from *Bacon's Essays*, or from *Moulton's edition of the Proverbs*, the *Psalms*, the *Book of Job*, or the writings attributed to *St. John*; for the selections in (3) from *Dryden*, *Shelley*, *Browning*, *Tennyson*, other poems of those

\*See note under English 1.

authors similar in scope and character. It is also recommended that, so far as time may permit, the best short poems of our American authors, and of the more recent English poets, be read in class, though not necessarily for purposes of minute study.

15a<sup>1</sup>. **Elementary French.** (1 unit.) Candidates who matriculate with both Latin and Greek and who have studied French during the last year of their High School course in a special class, may be credited for that work with one unit; provided that this work be approximately equivalent to the regular Elementary French as defined below.

15a<sup>2</sup>. **Elementary French.** (2 units.) French is a living language, and the object of the instruction should be to teach the student to read, write, and speak it as such. Therefore, as much French as possible should be used in class from the beginning. Translation into English should be sparingly used. It is preferable to get at a student's understanding of a passage by simple questions in French based on the passage. The answers of the student should be always in French.

At the end of the Elementary Course the student should be able to pronounce French accurately; to read French prose not of great difficulty; to understand, write, and speak French in simple sentences based on some text or on the ordinary affairs of life.

The work should comprise: (1) Careful attention to pronunciation. (2) The essentials of the grammar, especially the regular and most common irregular verbs, the forms and uses of all classes of pronouns, the uses of the prepositions and conjunctions. (3) The reading of some 300 duodecimo pages of modern prose. (4) Writing based on the texts read. Dictation is a useful exercise. The class work should be as far as possible in French.

15a<sup>3</sup>. **Intermediate French.** (1 unit.) At the end of the Intermediate Course the student should be able to read ordinary French prose; to write ordinary French in the narrative form; to carry on a simple conversation in French.

The work should comprise: (1) A review of the essentials of the grammar, especially the use of the auxiliary verbs; the meaning of the modes and tenses; a rather full knowledge of irregular verbs; the essentials of syntax, especially the most common uses of the subjunctive. (2) The reading of from

400 to 600 pages, from at least four standard authors, some of which should be in the dramatic form. (3) The writing of letters and short themes and the reproduction of passages of texts in French. The course should be carried on entirely in French.

**15a<sup>1</sup> Advanced French.** (1 unit.) At the end of the Advanced Course the student should be able to read more difficult French of a literary character of not earlier date than the seventeenth century; to write in French a short essay on some simple subject connected with the works read; to carry on a conversation in French.

The work should comprise from 600 to 1000 pages of standard French, classical and modern; the writing of numerous short themes in French; explanation and discussion of the text in French. The course should be given entirely in French.

The attention of modern language teachers is called to the valuable "Report of the Committee of Twelve."

**15b<sup>1</sup> Elementary German.** (1 unit.) Candidates who matriculate with both Latin and Greek and who have studied German during the last year of their High School course, in a special class, may be credited for that work with one unit. It is expected that a year's work, under these circumstances, will be approximately equivalent to the regular elementary German as defined below, and will enable the student to continue the study of German in the same college course as those who were credited with 15b<sup>2</sup>.

**15b<sup>2</sup> Elementary German.** (2 units.) The ability to read at sight easy German prose, to translate correctly simple English sentences into German, and to understand and answer in German simple questions on passages in the reading; a knowledge of the elements of German grammar.

The reading in Elementary German should amount to about 150 pages of graded modern prose.

The requirement in grammar includes: the regular inflection of nouns, adjectives, articles, pronouns, and weak verbs; the inflection of the more usual strong verbs; the more common prepositions; the ordinary uses of the modal auxiliaries; the elements of syntax, especially the rules concerning word-order and the use of the subjunctive.

15b<sup>3</sup>. **Intermediate German.** (1 unit.) The ability to read at sight ordinary German prose or poetry, to translate correctly into German a passage of easy English, and to carry on a simple conversation in German; a knowledge of the essentials of German grammar.

The reading in Intermediate German should amount, in addition to that done in the Elementary Course, to about 300 pages of recent and classical prose and poetry.

The requirement in grammar includes the inflection of the less usual strong verbs, the rules concerning the use of articles, cases, auxiliaries of all kinds, tenses and modes, and the elements of word formation.

15b<sup>4</sup>. **Advanced German.** (1 unit.) The ability to read at sight any not exceptionally difficult piece of German prose or poetry from the literature of the last one hundred and fifty years, to translate into German a passage of ordinary English prose, to answer in German questions relating to the lives and works of great writers studied, and to write in German a short, independent theme upon some assigned subject.

The reading in Advanced German should amount to about 400 pages of good modern (including eighteenth century) literature.

15c. **Spanish.** (2 units.) (1) An accurate knowledge of the essentials of the grammar, especially the verbs. (2) The ability to read ordinary Spanish prose, of which from 400 to 600 duodecimo pages should be read. (3) The ability to write ordinary Spanish. (4) The ability to carry on a simple conversation based on a text or on the ordinary affairs of life. [For more detailed suggestions, see Elementary French, subject 15a<sup>2</sup>.]

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#### REQUIREMENTS FOR ADMISSION BEGINNING WITH THE ACADEMIC SESSION 1905-06.

Beginning with the academic session of 1905-06 the Medical Faculty will demand at least two full years of college work from all applicants for admission.

This regulation renders it necessary for the applicant to present, as part of the high or secondary school preparation for the academic work, the highest entrance requirements in English, mathematics, and chemistry, designated in the Reg-

ister of the University of California as Subjects 14, 12a (1 and 2), and 12b, as well as the physics, Latin, and history required for entrance under Subjects 11 and 1 to 7 inclusive. Further qualifications in modern languages are very desirable before the student enters upon the preliminary academic work required of all applicants for admission to the Medical Department.

Beginning with the academic year 1905-06 all students desiring to enter the first year of the medical course and all new students seeking advanced standing must present evidence of having completed at least two full years of preliminary training in the undergraduate department of a college or university of recognized standing. Satisfactory evidence must also be presented that during these two years the applicant has completed courses of the following values:

**Chemistry.** (1) A course in general inorganic chemistry, including lectures, recitations, and laboratory work. *Lectures and recitations two or three hours; laboratory work five or six hours a week throughout one year.* In this course should be included the main facts of physical chemistry.

(2) Quantitative analysis. Gravimetric and volumetric. *Laboratory nine hours a week, one half-year.*

(3) Organic chemistry. A course of lectures, demonstrations, and recitations in organic chemistry. *Two hours a week, one half-year.*

Courses 1, 2, 3, 4, 5a, and 8 in the Department of Chemistry in the University of California cover the work outlined above, which constitutes the minimum required amount of chemistry.

**Physics.** (1) A course in general physics, including lectures, recitations, and laboratory work. *Seven hours per week throughout one year.*

(2) A laboratory course in physical measurements. *Six hours per week throughout one year.*

Courses 1 and 3 in the Department of Physics of the University of California cover the work outlined above, which constitutes the minimum required amount of physics.

**Biology.** (1) A general course in zoology, giving a knowledge of the main facts of biology, covering structure, life-history, and vital activities of selected types of animal life. The chief points of cytology and development, as well as a clear conception of the doctrine of descent, should also be

given in this course. *Two hours a week throughout one year.*

(2) Laboratory work in zoology covering the points brought out in Course 1, with objectivity and the training of the powers of observation as its special features. Practice in the recording of scientific phenomena both by means of word description and drawings should also be given. *Six hours per week throughout one year.*

Courses 1a and 1b in the Department of Zoology in the University of California cover, in general, the minimum work required in biology.

**English.** A course in English composition consisting of consultation and theme work. *At least three hours per week throughout one year.*

**French and German.** Applicants must possess a reading knowledge of scientific French and German.

The standard in the required courses outlined above must correspond and be at least equal to those given in the academic department of the University of California.

It is suggested that students should also during their preliminary academic training take certain elective courses which would materially increase the efficiency of the preparation for their later work in medicine. Advanced mathematics, comparative anatomy, embryology, laboratory work in organic chemistry, and advanced work in physics covering the theory of solutions, are courses of this nature. Entering students, therefore, are urged to present them on admission with the required work. The adequate training of a physician certainly presupposes a knowledge of physics, chemistry, biology, and the modern languages as outlined above; but the need of a broad foundation in general culture can not be overestimated, and students should select from the curricula of their colleges as many courses as possible beyond those demanded and recommended by the Faculty of the Medical Department.

Although the preliminary collegiate work will not be required of all students until the session of 1905, those who enter the medical school before that time are urged, for the sake of their future work in medicine, to conform as nearly as possible to the preparation outlined above, and to present on admission as many of the courses in physics, chemistry, and biology as circumstances permit.



## ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second, third, and fourth year classes only upon examinations covering the subjects in which they seek to be accredited. They must first present to the administrative officer evidence that they have satisfied the regular matriculation requirements, and obtain from the Dean authorization for examination.

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JOINT COURSE IN NATURAL SCIENCE AND MEDICINE GRANTING IN SIX YEARS THE DEGREES OF B.S. AND M.D.

Beginning with the academic session of 1905-6, when the new entrance requirements of the Medical Department go into effect, all students who satisfactorily complete the first two years of medicine will be granted the degree of B.S. in this University. This follows because the new requirements and the present pre-medical course are precisely similar, and all students would then enter the joint course now established by the combined action of the Medical Faculty and Academic Council on advanced standing. This plan covers six years' residence in the University, two in the College of Natural Sciences of Berkeley, and four in the Medical School in San Francisco. The members of the Medical Department teaching the scientific branches become *ipso facto* members of the Faculty of the College of Natural Sciences, and on satisfactory completion of the first two years of the medical course, this Faculty recommends the student for the degree of B.S.

The requirements for entrance in this course are those of the College of Natural Sciences, except that in Subject 12, mathematics and chemistry must be offered. Prospective students who contemplate taking this course are advised to present, likewise, additional credits in modern languages and mathematics. The following is an outline of the course in the College of Natural Sciences at Berkeley covering a period

of two years:

	Units.
English . . . . .	4
French . . . . .	6
German . . . . .	6
Mathematics . . . . .	6
Physics . . . . .	12
Chemistry . . . . .	15
Zoology . . . . .	15
Military Science and Physical Culture . . . . .	4
Electives—To be determined, as to amount and subjects for each student, by the Joint Committee of the Academic and Medical Faculties.	
Total . . . . .	68

The details concerning the extent and scope of these courses can be found in the new entrance requirements for the Medical Department, in which their content and aim are briefly described. Since the two years' work in the College of Natural Sciences is largely spent in prescribed work, little time is allowed for other subjects in general culture; and as students are urged to elect such courses, this can best be done by extending their period of residence in the collegiate department to three years.

Students intending to take the course should enter upon it at the beginning of the freshman year. They should also seek the advice of the chairman or some other member of the Joint Committee of the Academic and Medical Faculties before making out their schedule of studies for the first term of the freshman year.

After the completion of their work in the Academic Department in Berkeley, students enter the Medical School to complete the studies leading up to the bachelor's degree. These consist of

	Units.
Anatomy . . . . .	38
Physiology . . . . .	19
Pathology . . . . .	18
Total . . . . .	75

The work of these courses is described in detail in another part of this announcement.

After receiving the bachelor's degree, students enter upon the two years' study of the clinical branches of medicine, and upon satisfactory completion of these are granted the degree of M.D.

Special note should be taken by all students looking to the study of medicine in this University, that the preliminary course here described is in its essentials the only preparation that will admit to the clinical branches of medicine. Those, therefore, who are enrolled in the Colleges of Letters or Social Sciences, or in any of the technical colleges, and desire to study medicine, will need to supplement the usual courses in these colleges by such essentials of the course here outlined (French, German, Physics, Chemistry, and Biology) as may not have been included in their original schedules.

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### HOSPITAL APPOINTMENTS.

The position of interne, or House Physician and Surgeon, in the City and County Hospital, is open each year to six members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year and secure opportunities for accumulating an invaluable experience in various fields of medicine and surgery. Three begin their term of service July 1st and three January 1st, each serving an entire year. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the Medical Department or by competitive examination.

#### **Hospital Appointments. From Class of 1904.**

CITY AND COUNTY HOSPITAL (San Francisco)—Edward E. Baumeister, Paul Castelhun, Wilhelm Waldeyer. Polyclinic Ward—George A. Harker.

ST. LUKE'S HOSPITAL—D. Albert Ewing, Arthur W. Foshay, Foster M. Hoag, F. H. Van Tassell.

U. S. MARINE HOSPITAL—John F. Slavich, Henry C. Warren.

- GERMAN HOSPITAL—Maurice L. Baum, Louis C. Jacobs.  
MOUNT ZION HOSPITAL—Jacob Schwarz, Eugene K. Smith.  
SACRAMENTO COUNTY HOSPITAL—Morgan D. Baker, John M. Chain.  
ST. JOSEPH'S HOME—Robert Hector, Robert J. Nicholls.  
SAN JOAQUIN COUNTY HOSPITAL—S. Zeno Peoples.  
FRENCH HOSPITAL—Morton E. Hart.  
CHILDREN'S HOSPITAL—Edith S. Brownsill, Louise A. Lin-scott, Hannah E. Webster.  
PROVIDENCE HOSPITAL—Henning Koford.
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### BOARDING.

The expense of living in San Francisco is not great. Good board with room rent may be procured at the rate of \$5.00 per week at a convenient distance from the College building.

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### CLINICAL FACILITIES IN SAN FRANCISCO.

The clinical work of the Medical Department is given in the Out-Patient Dispensary, which is situated on New Montgomery Street, in a densely populated district of the city, and has a large clientele of patients of the poorer class. The dispensary is open from 9 A. M. until 6 P. M. each day, and students of the third and fourth years have practical instruction upon the various ambulatory cases that present themselves for treatment. The ward work and clinics are held in the wards of the City and County Hospital, where an abundance of material of all sorts is obtained for the work in medicine, surgery, and gynecology. Through the liberal policy of the Board of Supervisors and the Board of Health the medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department. In the near future, however, it is to be hoped that some liberal-minded citizen will make a donation for a University Hospital which will be completely under the control of the institution and where even more extensive opportunities for bedside instruction can be given to the students during their clinical years.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

Thus far none of the numerous private hospitals has been available for medical instruction, but it is hoped that their directors may soon throw open their wards for the use of the students.

The municipality has determined to erect a new City and County Hospital on the pavilion system, which will be modern in every respect and will provide improved laboratory and clinical facilities for medical students.

### FEES.

#### *First Year.*

Matriculation . . . . .	\$ 5 00
Tuition . . . . .	150 00
Dissecting material . . . . .	10 00

The fees are payable at the time of matriculation, and are not returnable.

A key and breakage deposit of \$25.00 is required for the use of lockers and to cover cost of material used in the laboratories and damage to college buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5.00 a year is charged for the use of a microscope, and \$2.00 for an immersion lens. Each student must provide himself with a microscope. In case the department is unable to supply the students with them, arrangements will be made with a firm in San Francisco to rent microscopes at the college rate. Students are urged to purchase instruments for their own use.

#### *Second Year.*

Tuition . . . . .	\$150 00
Dissecting material . . . . .	12 00
A key and breakage deposit of . . . . .	25 00

#### *Third Year.*

Tuition . . . . .	\$150 00
A key and breakage deposit of . . . . .	10 00

*Fourth Year.*

Tuition . . . . .	\$150 00
Graduation . . . . .	25 00
A key and breakage deposit of . . . . .	10 00

## LIBRARY.

The library and reading room of the Medical Department is on the first floor of the main building and contains about 2300 volumes. The catalogue shows that there are on the shelves many of the current text-books and some of the better monographs. Along certain lines the library is particularly strong and it will be the policy of the department by frequent purchases to make the collections uniform and to obtain as soon as possible complete files of the more important periodicals published in English, French, and German. Among the journals in the library are the following, with the exception of occasional missing volumes, the sets of which are complete:

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anatomische Hefte, Annals of Surgery, Archiv für Anatomie und Entwicklungsgeschichte, Archiv für Entwicklungsmechanik der Organismen, Archiv für Klinische Chirurgie, Archiv für Pathologische Anatomie und Physiologie, Archives of Surgery, Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berliner Klinische Wochenschrift, Boston Medical and Surgical Journal, British Medical Journal, Centralblatt für Bakteriologie und Parasitenkunde, Centralblatt für Chirurgie, Centralblatt für Gynecologie, Centralblatt für Klinische Medizin, Congrès Français de Chirurgie, Deutsche Medicinische Wochenschrift, Ergebnisse der Anatomie und Entwicklungsgeschichte, Fortschritte der Medizin, Jahrbücher der Gesamten Medizin, Jahresbericht der Gesamten Medizin, Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte, Jahresbericht über die Fortschritte der Anatomie und Physiologie, Jahresbericht über Pathogenen Mikroorganismen, Journal of the American Medical Association, Journal of Comparative Neurology, Journal of Experimental Medicine, Journal of Hygiene, Journal of Medical Research, London Lancet, Medical Record, Medical

Review of Reviews, *Morphologische Arbeiten*, New York Medical Journal, Philadelphia Medical Journal, *Revue de Chirurgie*, Transactions of American Surgical Association, *Verhandlungen der Deutschen Gesellschaft für Chirurgie*, Wiener Medizinische Wochenschrift, *Zeitschrift für Chirurgie*, *Zeitschrift für Morphologie und Anthropologie*.

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## ORGANIZATION OF INSTRUCTION.

### Session of 1904-05.

**Summary of Courses.** In conformity with the practice of the University, instruction is divided into three classes—didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory sessions, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value. This is likewise the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated. The advantages of concentration are many. The system offers more work to the

student and is conducive to favorable conditions of study, in that students in the prolonged and consecutive periods apply themselves better and enter more deeply into the subject. It also grants to the student much more free time, time of the greatest value for purposes of private study or advanced work.

It is believed that the students on account of this free time will take advantage of the elective courses offered by the departments of anatomy, physiology, and pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

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### CLASS STANDING AND EXAMINATIONS.

For the determination of class standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendations for Interneships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

*First year*.—Microscopic anatomy, chemical physiology, elementary physiology.

*Second year*.—Systematic human anatomy (including embryology), general physiology, morphological pathology, chemical pathology, and bacteriology.

*Third year*.—Therapeutics, materia medica, obstetrics, and general surgery.



*Fourth year.*—Internal medicine, clinical medicine, general surgery, clinical surgery, gynecology, operative obstetrics, and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that more than one condition can not be carried into the second, third, or fourth year, and this must be passed in order to render the student eligible for the examinations held at the end of that session. Under all circumstances, however, prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. The Faculty reserves the right to sever at any time the connection of any student with the Medical Department for what it deems either mental or moral unfitness for a career in medicine.

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## REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.

3. He must have done the required work and passed the stated examinations.

4. He must have paid in full the college fees

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## COURSES OF INSTRUCTION.

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### ANATOMY.

JOSEPH MARSHALL FLINT, M.D., Professor of Anatomy.

IRVING HARDESTY, Ph.D., Asst. Professor of Anatomy.

ROBERT ORTON MOODY, M.D., Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in the Hearst Anatomical Laboratory, which occupies rooms on several floors in the main medical building. The laboratories of the department have been entirely rebuilt and newly equipped. On the top floor are eight small dissecting rooms with capacity for from one to three tables each. The rooms are lighted from the ceilings, well ventilated, and fitted with special reference to the effect of a clean and pleasant environment upon the work of the students. The classes are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arterics and veins at any desired pressure. After this process is completed the bodies are preserved in wood alcohol vapor or a carbolic solution.

The teaching museum, consisting of specially prepared cor-rosions, injections, dissections, and models, is located in a large hall near the dissecting rooms.

The laboratory for microscopic anatomy is very large and has abundant north light. It is outfitted with microtomes and all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as

possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system by which a certain amount of selection is allowed in the regular work of the department.

### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology; (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections; (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student has a typical set of comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize him with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with laboratory drawings and contain an epitome of the student's notes and collateral reading.

#### 1. **Histology.**

PROF. HARDESTY.

In this course the anatomy of the cell, its variations in form, the conditions and processes of its proliferation and the modifications which result in its differentiation into a cell of

specialized type are considered. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as they are composed of cells and cell products and derived from one or the other of the germ layers. The study is always comparative.

*First year, 4 laboratory periods, 4 lectures per week, for 9 weeks. 3½ units.*

## **2. Microscopic Organology.**

PROF. HARDESTY.

The organs are discussed with reference to the form, arrangement, and number of the fundamental tissues composing them, with special reference to the structural and functional relations to other organs. In each case the student begins first with the tissue in situ, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

*First year, 4 laboratory periods, 4 lectures per week, for 9 weeks. 3½ units.*

## **3. Neurology.**

PROF. HARDESTY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with the view to tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

*4 lectures, 4 laboratory periods per week, for 9 weeks. 3½ units.*

## **SYSTEMATIC HUMAN ANATOMY.**

The courses in systematic anatomy are given by practical work entirely. There are no lectures or quizzes. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical rela-

tions are shown by models and frozen or formalin sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

**4. Osteology.**

DR. MOODY.

Each student is loaned a skeleton and is required to model in clay and draw each bone in the body.

*First year, 6 half days per week, for 8 weeks. 4½ units.*

**5. Head and Neck.**

PROF. FLINT AND DR. MOODY.

*First year, 6 half days per week, for 7 weeks. 4½ units.*

**6. Arm and Thorax.**

PROF. FLINT AND DR. MOODY.

*First year, 6 half days per week, for 7 weeks. 4½ units.*

**7. Leg and Abdominal Viscera.** PROF. FLINT AND DR. MOODY.

*First year, 6 half days per week, for 7 weeks. 4½ units.*

In his second year the student must repeat at least two of Courses 5, 6, and 7, provided they have already dissected the entire body in their first year. Research will be accepted in lieu of these courses.

**8. Organogenesis and Topographical Anatomy.**

PROF. FLINT.

The development of the various organs from their first appearance in the germinal layers to the conditions found in the adult body is briefly considered, together with the mechanics of the development of organs, the process of growth and regeneration.

*First and second years, 1 lecture and demonstration per week. 2 units.*

**9. Special Anatomy for Physicians and Advanced Students.**

PROF. FLINT AND DR. MOODY.

This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis, and abdominal viscera. The work is largely independent. A limited number of regular students will be permitted to take this course as an elective after finishing the required work of the department.

*Hours arranged to suit applicants. 4-8 units.*

**10. Research.**

PROF. FLINT AND PROF. HARDESTY.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. A certain number of units in Course 10 will be accepted in lieu of the required systematic anatomy of the second year from students who have shown marked ability in their work.

**PHYSIOLOGY.**

(Including Physiological Chemistry and Pharmacology.)

JACQUES LOEB, M.D., Professor of Physiology.

FRANK T. GREEN, Ph.G., Associate Professor of Physiological Chemistry.

MARTIN H. FISCHER, M.D., Assistant Professor of Physiology.

JOHN B. MACCALLUM, A.B., M.D., Assistant in Physiology.

GEORGES BULLOT, M.D., Assistant in Physiology.

The courses in Physiology are given during the first and second years. The instruction consists of lectures and recitations in physiology, physiological chemistry, and pharmacology, and laboratory work in each of these departments.

**1. First Year. Lectures in Physiology.** PROF. FISCHER.

In the lectures are covered the main facts of the physiology of the blood and circulation, respiration, absorption, secretion, muscle-nerve physiology, reproduction, and development.

*3 lectures a week, for 9 weeks.***2. First Year. Recitations in Physiology.**

PROF. FISCHER.

One recitation a week, for nine weeks, on the subjects outlined in Course 1.

**3. First Year. Laboratory Work in Physiology.**

PROF. FISCHER AND DRs. MACCALLUM AND BULLOT.

The course is designed to cover the main experiments in the physiology of the blood and circulation, respiration, absorption, secretion, and muscle-nerve physiology.

*3 three-hour laboratory periods a week, for 9 weeks.***4. Second Year. Lectures in Physiology.** DR. MACCALLUM.

These lectures are intended to cover the main facts of the

physiology of the central nervous system and of the special senses.

*3 lectures a week, for 9 weeks.*

**5. Second Year. Recitations in Physiology.**

DR. MACCALLUM.

One recitation a week for nine weeks on the subjects outlined in Course 4.

**6. Second Year. Laboratory Work in Physiology.**

PROF. FISCHER, DRs. MACCALLUM AND BULLOT.

The attempt is made in this course to familiarize the student with the more important experiments on the central nervous system and the special senses.

*3 three-hour laboratory periods a week, for 9 weeks.*

**7. Lectures in General Physiology.**

PROF. LOEB.

In these lectures are discussed metabolism, absorption, secretion, protoplasmic motion, the physiological effects of ions, the tropisms, artificial parthenogenesis, etc.

**8. Recitations in General Physiology.**

PROF. FISCHER AND DR. MACCALLUM.

One recitation a week, for nine weeks, on the lectures outlined in Course 7.

**9. Laboratory Work in General Physiology.**

PROF. FISCHER, DRs. MACCALLUM AND BULLOT.

The laboratory experiments are designed to elucidate the points touched upon in the lectures.

**10. Chemical Physiology.**

PROF. GREEN.

*5 lectures and 6 laboratory periods a week, for 9 weeks.*

PATHOLOGY.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

H. A. L. RYFKOGEL, M.D., Instructor in Pathology.

WILLIAM T. JANE, Technical Assistant.

Instruction in pathology is given in the Hearst Laboratory of Pathology during the second year, and at the City and County Hospital during the fourth year. The courses consist entirely of laboratory work; formal didactic teaching is not employed. The instruction consists of individual work upon the part of the student, supplemented by such demon-

strations and discussions as are considered necessary to fix and amplify the knowledge gained in first-hand study. The inductions, the theoretical and practical relations, and the numerous general considerations in pathology are brought into the course in the form of daily lectures that are opportune by virtue of the particular practical work in hand. It is believed that this correlation of general pathology to concrete laboratory work is more effective than a formal didactic course, and more rapidly develops the scientific independence of the student. Since adequate equipment is a *conditio sine qua non* of rapid and sustained work, the students' laboratories have been equipped with the best instruments and apparatus of latest design. It is the principle of instruction in this department to bring the student into a contemplation of pathology from the biological point of view, since only from this standpoint can the scope and dignity of the science and its relations to hygiene and preventive medicine be adequately understood and valued. Properly studied, pathology forms the substratum of clinical medicine, and many of the manipulations employed in pathological studies are indispensable to the practice of medicine. A knowledge of pathology not only endows the student with conceptions of the nature of disease, but also trains in the diagnosis of disease.

### 1. **Morphological Pathology.**

PROF. TAYLOR AND—

The course includes instruction upon the chief organs and tissues in the order of their importance. It is realized that the entire subject can not be covered, and in lieu of such an attempt the principal lesions of the more important organs and tissues are studied in an exhaustive manner. Throughout the course emphasis is placed upon the importance of acquiring accurate visual images of the lesions.

In the study of the lesions of disease the students are taught to found their observations upon an ultimate analysis of tissue units upon the basis of cytology and microscopic anatomy. From the results of these ultimate analyses the student will build up the groupings which constitute pathological lesions, thus avoiding all confusion of theoretical classifications and didactic schemata. The gross lesions are demonstrated in the fresh state and upon Kaiserling preparations from the museum. In the study of etiology, the experiment is employed



whenever feasible and advantageous. Inflammation, in its various phases, is studied largely from the experimental point of view. Systematic reports and original drawings are regular portions of the work.

*4 lectures, 12 hours laboratory work per week, 18 weeks. 8 units.*

Prerequisite: Completion of the course in first year histology and microscopic anatomy.

## **2. Chemical Pathology.**

PROF. TAYLOR.

In this course disease is studied from the point of view of disturbed functionation; this and the previously detailed course contrast pathological physiology with pathological anatomy. Physico-chemical biology is becoming daily of greater importance, and upon its study depends the comprehension of the nature of many diseases and their progressions, this being particularly true of the micro-organisial infections and the metabolic diseases. The course includes the chemical study of the organs and tissues of the body in various diseases, of bacterial processes, of exudates and transudates, and of the gastric contents, the feces and the urine.

*5 lectures, 15 hours laboratory work per week, 9 weeks. 5 units.*

Prerequisite: Completion of the first year course in chemical physiology.

## **3. Bacteriology.**

DR. RYFKOGEL.

The first portion of the course consists in the study of microbiology. Micro-organisms of many types and kinds, both saprophytic and pathogenic, are exhaustively studied. Following this the students are instructed in the narrower domain of bacteriological pathology, with particular reference to bacterial intoxication and immunity. The infections are studied in original lesions and by experiment, and the relations of micro-organisms to general and special pathological conditions are thus elucidated.

*5 lectures, 15 hours laboratory work per week, 9 weeks. 5 units.*

Prerequisite: Completion of the first year course in histology and microscopic anatomy.

## **4. Autopsy Course.**

PROF. TAYLOR.

During the fourth year an autopsy course is conducted in the City and County Hospital. The members of the fourth

year class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students.

*Two sections of 1 semester each, 4 hours per week, except in the event of absence of material. 1 unit.*

**Research Department of Hearst Pathological Laboratory.** The private laboratories of pathology are installed with equipments for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

#### THERAPEUTICS.

RICHARD M. H. BERNDT, M.D., Instructor in Therapeutics.

CHAS. LEWIS MORGAN, M.D., Lecturer on Materia Medica and Pharmacy.

##### 1. Physiological Action of Drugs.

DR. BERNDT.

The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.

*Third year, 2 hours per week, 27 weeks. 3 units.*

##### 2. Materia Medica and Pharmacy.

DRS. MORGAN AND SIMMONS.

The course is purely practical, embracing the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

#### MEDICINE.

WILLIAM WATT KERR, M.D., Professor of Clinical Medicine.

HERBERT C. MOFFITT, M.D., Professor of the Theory and Practice of Medicine.

CLARENCE QUINAN, M.D., Instructor in Medicine.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.

FRED C. BURROWS, M.D., Assistant in Medicine.

CHARLES M. COOPER, M.D., Assistant in Medicine.

CHESTER W. WOOLSEY, M.D., Assistant in Medicine.

Instruction in medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the methods of diagnosis, and in the rational employment of therapeutics. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and therefore properly requires a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the fourth year to place the students upon individual practical work.

**1. Physical Diagnosis.** DR. EBRIGHT, and Hospital Internes.

This course is given in the wards of the City and County Hospital, and consists in a review of the topographical anatomy of the viscera, in systematic instruction in inspection, palpation, percussion, auscultation, and in the adjuncts to physical diagnosis. The class is divided into sections, insuring individual instruction.

*Third year, 3 hours a week, 1 semester. 1 unit.*

**2. Dispensary Clinics.**

The class is divided into sections and the students are brought into direct contact with the patients. The students are systematically instructed in the taking of histories, in the general and special examinations of the sick, and in treatment.

*Third year, 4 hours a week throughout the year. 2½ units.*

**3. Clinics in Internal Medicine.**

PROF. KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures and demonstrations upon the abundant material in the medical ward of the City and County Hospital. Students are assigned to the beds for the study of individual cases.

*3 hours a week through 2 years. 6 units.*

**4. Lectures on Medicine.**

PROF. MOFFITT.

A systematic course of lectures on internal medicine. Purely didactic teaching is subordinated to lectures illustrated and supplemented by clinical material. Whenever possible

patients are brought into the lectures. Themes are assigned to individual students, and the reports are a portion of the regular student's work.

*Third and fourth years, 2 hours a week through 2 years. 8 units.*

**5. Bedside Instruction.**

PROF. KERR, DRs. EBRIGHT, BURROWS, COOPER, AND WOOLSEY.

The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well-equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies.

*Fourth year, 2 hours per week through 1 semester.  $\frac{2}{3}$  unit.*

**6. Clinical Course at the Out-Patient Department.**

PROF. MOFFITT.

The course consists of one clinic per week to one half the fourth year class, and one ward class session per week to sections of not more than six students. In this course the particular aspects of ambulatory material are thoroughly studied.

*Fourth year. 5-6 units.*

**7. Dispensary Clinics.**

DRs. QUINAN AND BURROWS.

The class is divided into sections, which attend the ambulatory clinics, where they are instructed in the examinations of patients, and in systematic study of internal diseases.

*Fourth year, 1 hour per week,  $1\frac{2}{3}$  units.*

**SURGERY.**

ROBERT A. McLEAN, M.D., Emeritus Professor of Clinical Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

GEORGE FRANKLIN SHIELS, M.D., Associate Professor  
of the Principles and Practice of Surgery.

J. HENRY BARBAT, M.D., Instructor in Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

HAROLD BRUNN, M. D., Instructor in Surgery.

WALLACE I. TERRY, M.D., Instructor in Surgery.

ALFRED NEWMAN, M.D., Assistant in Surgery.

LEWIS S. MACE, M.D., Assistant in Surgery.

TRACY G. RUSSELL, M.D., Assistant in Surgery.

HAROLD JOHNSON, M.D., Assistant in Surgery.

ARTHUR L. FISHER, M.D., Assistant in Surgery.

C. G. LEVISON, M.D., Assistant in Surgery.

H. B. REYNOLDS, M.D., Assistant in Surgery.

C. M. COOPER, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years, and while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. Considerable clinical material is found in the wards of the City and County Hospital and numerous cases of minor surgery are received in the Out-Patient Dispensary on New Montgomery street. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course. Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, at which papers are read and discussed under the guidance of the professor of surgery. A similar meeting is conducted for the third year class by one of the assistants.

### 1. General Surgery.

PROF. SHERMAN AND ASSOC. PROF. SHIELS.

The principles of general surgery are discussed in the lectures illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

*Third and fourth years, 2 hours a week through 2 years. 8 units.*

2. **Clinical Surgery.** PROF. HUNTINGTON, and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment, and asepsis are discussed at the bedside. Especial attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anesthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

*Third and fourth years, 3 hours a week through the years. 6 units.*

3. **Surgical Pathology.** DRs. BRUNN AND JOHNSON.

This course will present in a practical way the application of many of those points in the previous work in pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of microorganisms by means of the lymphatics through the lungs, liver and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The

work in this course is given entirely in the laboratory and will be wholly practical.

*Third year, 12 hours a week, 9 weeks. 2 units.*

**4. Operative Surgery on the Cadaver.** DR. BARBAT.

The classical operations in the abdomen are performed by the students of the class individually, imitating as closely as possible the arrangement and technique of the operating room.

*Fourth year, 2 hours a week, 9 weeks. ½ unit.*

**5. Operative Surgery on the Cadaver.** DR. KUGELER.

This is an extension of Course 4, in which the surgery of the extremities is studied by practical operations on the cadaver under the same technical arrangements as in Course 4.

*Fourth year, 2 hours a week, 9 weeks. ½ unit.*

**6. Wound Dressing, Minor Surgery, and Bandaging.**

DR. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

*Third year, 3 hours a week, one-half year. 1 unit.*

**7. Ward Classes.** DRS. LEVISON, COOPER, AND REYNOLDS.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

*Fourth year, 2 hours a week through 1 semester. ¾ unit.*

**8. Surgical Dispensary.**

DRS. LEVISON, JOHNSON, AND FISHER.

This course is given upon the ambulatory material at the out-patient department and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

*Third year, 2 hours, and fourth year, 3 hours a week. 1½ units.*

**MICROSCOPICAL AND CHEMICAL DIAGNOSIS.**

PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.

HERBERT F. ALLEN, M.D., Assistant in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology, which are of assistance to the clinician in reaching a diagnosis. It aims to act as connecting link between the work of the preclinical and the clinical years.

1. DRS. BROWN AND ALLEN.

This course serves as an introduction to the students' work in practical medicine and surgery and is given almost exclusively by the laboratory method. A simple, effective, well-equipped, well-lighted laboratory, accommodating one half the class is situated on the grounds of the City and County Hospital, from the wards of which material for the course is obtained. During the year routine instruction is given on the normal and pathological conditions of the blood, with thorough training in the various methods of its examination, such as the examination of fresh specimens, hæmaglobin estimations, and the study of dried and stained preparations. The anæmiæ following this and the condition of the blood in all diseases in which blood examinations tend to aid the clinician in his work are thoroughly considered. In every instance material for the class is obtained from cases in the wards. If these do not exist, specimens from the cabinet are used for purposes of instruction. Considerable time is devoted to a thorough study of the malarial blood, together with a life-history of the parasites and the modes of transmission of the diseases. The examination of the urine in various diseases forms an important part of the course, and for this purpose the newer and more effective methods are used. The examination of the sputum and feces in health and disease, together with a brief review of parasitology and the methods of diagnosis of parasitic diseases, are taken up with practical laboratory methods.

Through the courtesy of the officials at the Presidio the secretions and excretions of patients suffering from tropical diseases can be obtained for the use of the class. Considerable emphasis will be laid on this feature of the work, since the acquisition of our new insular territories has greatly increased the trade between California and the Orient, and thus renders essential the protection of the State from the intro-



duction of various tropical diseases. This demands the thorough training of students in work of this kind.

The course concludes with a thorough analysis of the gastric secretions and contents, exudates and transudates.

*Third year, 12 hours a week, 9 weeks. 2 units.*

## OBSTETRICS.

ALFRED B. SPALDING, M.D., Instructor in Obstetrics.

The work in the department of obstetrics is given by lectures, demonstration, and clinics. The special anatomy and physiology of the female pelvis and its contents are reviewed. Normal and pathological pregnancies, normal and pathological parturitions, and normal and pathological puerperæ are described in detail. Questions of treatment are discussed and illustrated by means of charts, manikins, and specimens.

### 1. General Obstetrics.

DR. SPALDING.

Lectures and demonstrations.

*Third year, 3 hours per week throughout the year. 6 units.*

### 2. Practical Obstetrics.

DR. SPALDING.

In this course students are allowed to examine patients normally pregnant. Complicated cases of pregnancy and parturition are shown and discussed, their diagnosis and treatments considered. During this period the students attend cases of confinement at the City and County Hospital and patients from the out-patient department. As a rule each student sees six cases of labor. Clinical lecture and demonstration.

*Fourth year, 1 hour per week throughout the year. 1 unit.*

## GYNECOLOGY.

CHARLES A. VON HOFFMANN, M.D., Professor of Gynecology.

BEVERLY MacMONAGLE, M.D., Lecturer on Gynecology.

WILLIAM G. MOORE, M.D., Assistant in Gynecology.

Instruction in gynecology is given during the fourth year. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

**1. Clinics in Gynecology.**

PROF. VON HOFFMANN AND DR. MOORE.

This course is given upon the material in the wards of the City and County Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course, instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

*Fourth year, 2 hours a week throughout the year. 2 units.*

**2. Lectures in Gynecology.**

DR. MACMONAGLE.

A systematic course of lectures, combined with recitations.

*Fourth year, 1 hour a week throughout the year. 2 units.*

**3. Dispensary Clinics.**

PROF. VON HOFFMANN AND DR. MOORE.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

*Fourth year, 18 hours for each section.  $\frac{1}{2}$  unit.*

**MEDICAL JURISPRUDENCE.****Lectures on Medical Jurisprudence.**

DR. D'ANCONA.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death and the jurisprudence of insanity.

*Third year, 1 hour a week, second term.*

**ELECTIVES.**

The elective clinical branches which are offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery, and orthopedic surgery. Instruction in the general aspects of the diseases of children and of the nervous system is comprised in the work of the department of medicine. This general work is, in the elective subjects of pediatrics and clinical neurology, supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the department of surgery. This general work is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose, and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature. It is the intention of the Faculty in the near future to increase the electives in the clinical as well as in the preclinical years.

### PEDIATRICS.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, M.D., Instructor of Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences and practical work in the Out-Patient Dispensary. The dispensary, located in a densely populated section of the city, affords an extremely favorable field for the observation of the diseases peculiar to children.

#### 1. Lectures and Recitations.

PROF. LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

*Fourth year, 1 hour a week throughout the year. 2 units.*

#### 2. Dispensary Clinics.

DR. BLUM.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

*Fourth year, 2 hours a week throughout the year. 1½ units.*

## DISEASES OF THE SKIN.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HOWARD MORROW, M.D., Assistant in Diseases of the Skin.

**1. Diseases of the Skin.**

PROF. MONTGOMERY AND DR. MORROW.

The instruction in the department consists in:

(a) A review of the histology and microscopic anatomy of the skin.

(b) The study of the pathology and bacteriology of the various cutaneous lesions. So far as possible the instruction in this aspect of the subject is carried parallel to the clinical study of individual cases. In the event of the absence of direct clinical material bearing upon any particular disease, this plan is supplemented by the demonstration and examination of museum specimens and collected tissues.

(c) Practical work in the dermatological clinic. Instruction is founded upon the anatomy and pathology, as elucidated in the previous sections. The work is purely practical and individual; no didactic teaching is included.

*Fourth year, 2 hours a week throughout the year. 2 units.*

## CLINICAL NEUROLOGY.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

The course of instruction in diseases of the nervous system comprises lectures, clinics, demonstrations, and practical work. It is the plan of the department to introduce students into the specialized work in nervous diseases.

**1. Clinic in Neurology.**

PROF. NEWMARK.

The work in this course is entirely practical and covers the exhibition of selected dispensary cases and the training of students in the methods of conducting physical examinations on neurological cases and in testing the reactions of degeneration, sense, and perception. Patients suffering from various diseases of the nervous system are shown, questions of diagnosis and prognosis considered, followed by a discussion of the pathological lesions shown by these patients.

These discussions are illustrated by numerous pathological specimens prepared by the newer neurological methods.

*Fourth year, 1 hour per week throughout the year. 1 unit.*

### DEPARTMENT OF OPHTHALMOLOGY.

GEORGE HERMAN POWERS, M.D., Professor of Ophthalmology.

GEORGE W. MERRITT, M.D., Assistant in Ophthalmology.

CARL S. G. NAGEL, M.D., Assistant in Ophthalmology.

ANNA M. FLYNN, Assistant in Ophthalmology.

Instruction in ophthalmology is given at the City and County Hospital and at the Out-Patient Dispensary. Operative cases are shown at the hospital, while valuable material for diagnosis and treatment is obtained from the ambulatory cases at the dispensary.

#### 1. Ophthalmology.

PROF. POWERS, AND DRS. MERRITT, NAGEL, AND FLYNN.

In this course the pathology, diagnosis, and treatment of the diseases of the eye are covered by means of lectures and practical work.

*Fourth year, 3 hours a week throughout the year, 1 lecture, 2 hours practical work per week. 3½ units.*

### OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

ALBERT B. MCKEE, M.D., Instructor of Diseases of the Ear, Nose, and Throat.

GARDNER PERRY POND, M.D., Instructor of Diseases of the Ear, Nose, and Throat.

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated at the clinic at the City and County Hospital.

#### 1. Otology, Rhinology, and Laryngology.

DRS. MCKEE AND POND.

Clinic and dispensary course.

*Fourth year, 3 hours a week throughout the year, 1 hour clinic, 2 hours practical work one-half year. 1½ units.*

## DEPARTMENT OF GENITO-URINARY SURGERY.

JOHN MARSHALL WILLIAMSON, M.D., Professor of  
Genito-Urinary Surgery.

JOHN C. SPENCER, M.D., Assistant in Genito-Urinary  
Surgery.

CECIL M. ARMISTEAD, M.D., Assistant in Genito-  
Urinary Surgery.

E. L. WEMPLE, JR., M.D., Assistant in Genito-Urinary  
Surgery.

Instruction in genito-urinary surgery is given at the Out-Patient Dispensary. A large number of cases illustrating the various diseases of the genito-urinary tract pass under the observation of the class. Students are thoroughly drilled in the methods of diagnosis and the operative procedures required in the treatment of this class of patients.

**1. Genito-Urinary Surgery.**

PROF. WILLIAMSON and Assistants.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. A weekly clinic is also held in the wards of the City and County Hospital.

*4 hours a week throughout the year, 1 clinic per week, 3 hours practical work. 3 units.*

## ORTHOPEDIC SURGERY.

— —, Professor of Orthopedic Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic  
Surgery.

JAMES T. WATKINS, M.D., Assistant in Orthopedic  
Surgery.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces.

*Fourth year, 3 hours a week throughout the year. 2 units.*

## SUMMER COURSES.

In case there is a sufficient number of applicants a limited number of special courses will be given. Application must be made not later than March 15th. Courses begin April 1st.

The tuition for each of these courses is \$50.00. In addition a charge will be made for actual material consumed.

## DEPARTMENT OF ANATOMY.

**For the Session of 1904-05.****1. Anatomical and Histological Technique.**

PROF. FLINT AND MR. MILLER.

It will be the aim of this course to give the student a general idea of all the common and many of the finer methods of anatomical and histological technique. Killing, fixation, hardening, sectioning, and staining are taken up in detail. The work is nearly all practical and the student must prepare tissues by various methods. Practical work in injecting, preservation of material, corrosions, digestion, etc., is given. Occasional lectures on the principles involved in this work are held.

**2. Histology, Microscopic Organology, and Neurology.**

PROF. HARDESTY.

This course covers briefly the microscopic features of the simple tissues, the organs and the nervous system. Applicants who so desire may emphasize one feature of the work more than another. A comprehensive series of sections will be prepared for the student so that the maximum amount of time may be spent in the study of the tissues.

**3. Systematic Human Anatomy.**

DR. MOODY.

- (a) Osteology.
- (b) Head and neck.
- (c) Arm and thoracic viscera.
- (d) Leg and abdominal viscera.

This work is entirely practical, and consists of dissections carried on under the direction of the instructor. Topographical and embryological points are emphasized as they arise.

Only one of subdivisions *a*, *b*, *c*, or *d*, can be taken in the six weeks allotted for this course.

**4. Special Anatomy for Physicians.**

PROF. FLINT.

The object of this course is to give an opportunity for physicians and others who desire to become familiar with the finer anatomical relations of special regions of the body, as for example, eye, ear, thoracic, abdominal, or pelvic viscera. The work is intended especially for those who contemplate work in the special fields of medicine and surgery or for those who wish to familiarize themselves with the main points of topographical anatomy.

**5. Research.**

PROF. FLINT AND PROF. HARDESTY.

The laboratory will be open during the summer. A limited number of suitably trained individuals can work upon original problems in anatomy under the direction of the instructors in charge.

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**DEPARTMENT OF PATHOLOGY.****1. Special Pathology.**

PROF. TAYLOR.

A course in special branches of pathology for advanced students. A good knowledge of general pathology and experience in pathological work are a prerequisite.

**2. Chemical Pathology.**

PROF. TAYLOR.

This course contemplates the study of the chemistry of pathological processes. For this course an adequate knowledge of chemical physiology and technical experience are a prerequisite.

**3. Bacteriology.**

DR. RYFKOGEL.

Instruction in this course is from the standpoint of general pathology and clinical medicine, the aim being to explain the general relation of the science, to illustrate the etiological relations of disease, and to equip the student and practitioner with the bacteriological procedures of diagnosis now established as necessary adjuncts to clinical medicine.



## GRADUATES, 1904.

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Morgan Dillon Baker.....	San Jose
Maurice Lowell Baum.....	Livermore
Edward Emery Baumeister, Ph. G.....	San Francisco
David William Brown.....	Yolo
Edith Sara Brownsill, B.L.....	Alameda
Paul Castelhum, B.S.....	San Francisco
John Nolan Chain, B.S.....	San Francisco
David Albert Ewing.....	Seattle, Washington
Arthur Wellesley Foshay, A.B.....	Albany, Oregon
George Asa Harker.....	Mill Valley
Morton Edwin Hart.....	San Francisco
Robert Hector, Jr.....	Loomis
Foster Melancton Hoag.....	Boonville
Louis Clive Jacobs, Ph. G.....	San Francisco
Henning Koford .....	Berkeley
Louise Adra Linscott, B.L.....	Berkeley
Clarke Loring McClish, M.S.....	College Park
Pernier Albert Mix.....	Berkeley
Robert Julian Nicholls.....	Berkeley
Stuart Zeno Peoples.....	Petaluma
Jacob Schwarz.....	San Francisco
John Francis Slavich.....	Oakland
Eugene Kneeland Smith.....	Grass Valley
Fred Hugh Van Tassell.....	Glendora
Wilhelm Waldeyer.....	San Francisco
Henry Claud Warren.....	Winnemucca, Nevada
Hannah Ellen Webster.....	San Jose

## MATRICULATES.

1903-04.

## FOURTH YEAR CLASS.

Morgan Dillon Baker, Jr.	San Jose
Maurice Lowell Baum	Livermore
Edward Emery Baumeister, Ph.G. (Univ. of Cal.)	S. F.
Edith Sara Brownsill, B.L. (Univ. of Cal.)	Alameda
Paul Castelhun, B.S. (Univ. of Cal.)	San Francisco
John Nolan Chain, B.S. (Univ. of Cal.)	San Francisco
Palmer Howard Dunbar, D.D.S. (Univ. of Cal.)	S. F.
David Albert Ewing	Seattle, Washington
Arthur Wellesley Foshay, A.B. (Albany College)	Albany, Or.
George Asa Harker	Mill Valley
Morton Edwin Hart	San Francisco
Robert Hector, Jr.	Loomis
Foster Melancton Hoag	Boonville
Louis Clive Jacobs, Ph. G. (Univ. of Cal.)	San Francisco
Henning Koford	Berkeley
Louise Adra Linscott, B. L. (Univ. of Cal.)	Berkeley
Clarke Loring McClish, M.S. (Univ. of Pac.)	College Park
Pernier Albert Mix	Berkeley
Robert Julian Nicholls	Berkeley
Stuart Zeno Peoples	Petaluma
Oscar Charles Reeve	Berkeley
John Peter Sandholdt	Watsonville
Jacob Schwarz	San Francisco
John Francis Slavich	Oakland
Eugene Kneeland Smith	Grass Valley
Fred Hugh Van Tassell	Glendora
Wilhelm Waldeyer	San Francisco
Henry Claud Warren	Winnemucca, Nevada
Hannah Ellen Webster	San Jose

## THIRD YEAR CLASS.

George Cummings Albee, B.S. (Beloit College)	Berkeley
Edgar William Alexander, B.S. (Univ. of Cal.)	Oakland

Coniah Leigh Bigelow, B.S. (Univ. of Cal.)	San Francisco
James Clark Blair, A.B. (Univ. of Cal.)	San Francisco
Constantine Raphael Bricca, A.B. (St. Ignatius College)	San Francisco
George A. Briggs	Elk Grove
William Franklin Cothran	San Jose
Ambrose Franklin Cowden	Forest Hill
Mary Tom De Haven	San Francisco
Samuel Percy Hardy	Oakland
Harriette Buttler Harker, A.B. (Vassar College)	Mill Valley
Herman Verplanck Hoffman, A.B. (St. Clara College)	San Francisco
William Kenney	Sespe
John William Peck	San Francisco
Louis Xavier Ryan, A.B. (St. Ignatius College)	S. F.
George Samuel Snyder	San Francisco
Gifford Lyne Sobey, A.B. (Leland Stanford Jr. Univ.)	San Francisco
Eldridge Curtis Turner	Sacramento
John Irving Vickerson	Lodi

## SECOND YEAR CLASS.

Alexander Adler, B.S. (Univ. of Cal.)	San Francisco
Olive Violet Brasier	Butte, Montana
Sidney Ray Dannenbaum	San Francisco
Alex Vincent Doran	San Francisco
*Louis Halford Earle	Berkeley
William Cooper Eidenmüller, B.S. (Univ. of Cal.)	Berkeley
Matilda Anne Feeley	San Jose
John Henry Franklin	Gilroy
Georgie Mary Hood	San Francisco
George Graham Hunter	Bakersfield
Louise Mary Igo	San Francisco
Charles Breckenfeld Jones	Sacramento
Herman Kronenberg	San Francisco
David Joseph Mahan	Eureka
Richard Leon Ochsner	Sacramento

\*Not in regular attendance.

Leo Lloyd Sexton.....	San Francisco
Waid James Stone.....	San Francisco
Jackson Temple, Ph.G. (Univ. of Cal.).....	Santa Rosa
Joseph Thomas Wrenn.....	Placerville
Reuben Sylvester Zumwalt.....	Yuba City

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### FIRST YEAR CLASS.

Archie Addison Alexander, A.B. (Univ. of Cal.)..	Haywards
*Archibald Moore Alexander.....	Riverside
*George Foster Beard.....	Sacramento
Elmer Wiley Bingaman.....	Soledad
Edwin Thomas Brink, B.S. (Pomona College).....	Pomona
Wilfred Everett Bixby.....	Oakland
*Henry Buckmann .....	Sacramento
John Aloysius Clark, A.B. (St. Clara College).....	Gilroy
Lloyd Alexander Craig.....	San Francisco
William Calhoun Dawson.....	Eldridge
Thomas Garfield Dodds.....	Kern City
Cornelius Thomas Devine, A.B. (St. Clara Col- lege) .....	Berkeley
†Margaret Caroline Dowling.....	San Francisco
Harry Emerson Foster.....	Oakland
*Frank Edward Frates.....	Ione
*Eugene Lawrence Hackett.....	San Francisco
*Bert J. Hoffman.....	Tulare
Miles Hopkins.....	Dayton, Washington
Walter Orrin Howell.....	Hopland
Hans Crawford Johnson.....	Oroville
James Harvey Johnson.....	Auckland, New Zealand
Paul Kenneth Joy.....	Salinas
Charles Bradford McKee.....	Sacramento
Alfred Dow Long.....	San Francisco
*Newbern Turner McArthur.....	Oakland
Lester Newman, B.L. (Univ. of Cal.).....	Oakland
Earl Emmet Ostrom.....	Marysville
Romilda Paroni, B.S. (Univ. of Cal.).....	Berkeley
Charles Arthur Pauson, B.S. (Univ. of Cal.)..	San Francisco

\*Not in regular attendance.

†Special Student.

Edward August Peterson.....	Auburn
*George Gentry Poindexter.....	Dillon, Montana
Mehitabel Clara Proctor.....	Berkeley
*Stanley Herbert Robbins, Ph. G.....	San Francisco
*Howard Edwin Ruggles.....	San Francisco
Otto Theodor Schulze, B.L. (Univ. of Cal.).....	Dixon
Middleton Pemberton Stansbury, B.S. (Univ. of Cal.).....	Chico
Thomas Albion Stoddard, B.S. (Univ. of Cal.).....	Santa Barbara
†Bertram Stone, M.D. (Univ. of Cal.).....	Crescent City
Florence Mabel Sylvester, B.L. (Univ. of Minne- sota) .....	Berkeley
Gustav Herman Taubles.....	San Francisco
Gavin James Telfer.....	San Jose
Irving Boyd Thompson.....	Oakdale
Allen Moore Walcott.....	Oakland
*John Melville Willard.....	Oakland
*William Henry Witzemann.....	San Francisco

\*Not in regular attendance.

†Special student.

UNIVERSITY OF CALIFORNIA  
MEDICAL DEPARTMENT

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ANNOUNCEMENT  
OF  
COURSES OF INSTRUCTION  
FOR THE ACADEMIC YEAR  
1905-1906

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BERKELEY  
The University Press  
1905



## CALENDAR.

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### 1905

- Aug. 11-15** ..... Academic year in the Medical and Academic Departments begins. Entrance examinations at Berkeley for the Medical and Academic Departments.
- Aug. 11, 12, 14** ..... 10 a.m. to 2 p.m. At Medical Department. Applications for admission to the Medical Department; registration of students of all the classes of the Medical Department; payment of fees.
- Aug. 14** ..... Class work begins.
- Aug. 18** ..... 11 a.m. Opening exercises.
- Sept. 9** ..... Admission Day—a holiday.
- Nov. 23** ..... Thanksgiving Day—a holiday.
- Dec. 23** ..... Christmas vacation begins.

### 1906

- Jan. 8** ..... Second term begins.
- Feb. 22** ..... Holiday.
- May 1** ..... Examinations begin.
- May 15** ..... Term ends.



## REGENTS OF THE UNIVERSITY.

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### REGENTS EX OFFICIO.

HIS EXCELLENCY GEORGE COOPER PARDEE, M.A., M.D., Sacramento  
*Governor, President of the Regents ex officio.*

HIS HONOR ALDEN ANDERSON, - - 2 Morgan Street, Suisun City  
*Lieutenant-Governor.*

HON. FRANK CLARKE PRESCOTT, - 32 East Olive Avenue, Redlands  
*Speaker of the Assembly.*

HON. THOMAS JEFFERSON KIRK, - - - - - Sacramento  
*State Superintendent of Public Instruction.*

HON. BENJAMIN FRANKLIN RUSH, - - - - - Suisun City  
*President of the State Board of Agriculture.*

RUDOLPH JULIUS TAUSSIG, Esq., - 26 Main Street, San Francisco  
*President of the Mechanics' Institute.*

BENJAMIN IDE WHEELER, Ph.D., LL.D., 1820 Scenic Avenue, Berkeley  
*President of the University.*

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### APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

	†Term Expires.
ISAIAS WILLIAM HELLMAN, Esq., - - - - - Nevada National Bank, San Francisco.	1918
CHESTER ROWELL, M.D., - - - - - Fresno.	1910
HON. JAMES ANDREW WAYMIRE, - - - - - Alameda.	1908
HON. CHARLES WILLIAM SLACK, Ph.B., LL.B., - - - 309 Montgomery Street, San Francisco.	1910
JACOB BERT REINSTEIN, M.A., - - - - - 217 Sansome Street, San Francisco.	1912

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† Terms of Regents expire March 1.

JOHN ELIOT BUDD, A.B.,	- - - - -	1916
Stockton.		
MRS. PHOEBE APPERSON HEARST,	- - - - -	1914
Pleasanton.		
ARTHUR WILLIAM FOSTER, Esq.,	- - - - -	1916
Mutual Life Building, San Francisco.		
GARRET W. McENERNEY, Esq.,	- - - - -	1920
309 Montgomery Street, San Francisco.		
CHARLES NORMAN ELLINWOOD, M.D.,	- - - - -	1908
2739 Pacific Avenue, San Francisco.		
CHARLES STETSON WHEELER, B.L.,	- - - - -	1906
10 Montgomery Street, San Francisco.		
GUY CHAFFEE EARL, A.B.,	- - - - -	1918
12 McClure Street, Oakland.		
HON. JAMES WILFRED MCKINLEY, B.S.,	- - - - -	1906
254 South Broadway, Los Angeles.		
REV. PETER CHRISTOPHER YORKE, S.T.L.,	- - - - -	1912
1267 Sixteenth Avenue, Oakland.		
JOHN ALEXANDER BRITTON, Esq.,	- - - - -	1914
632 Walsworth Avenue, Oakland.		
FREDERICK WILLIAM DOHRMANN, Esq.,	- - - - -	1920
124 Sutter Street, San Francisco.		

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OFFICERS OF THE REGENTS.

HIS EXCELLENCY GEORGE COOPER PARDEE, M.A., M.D.,	Sacramento
<i>President.</i>	
VICTOR HENDRICKS HENDERSON, B.L.,	- - - - -
- - - - -	2345 Telegraph Avenue, Berkeley
<i>Acting Secretary and Land Agent.</i>	
ISAIAS WILLIAM HELLMAN, Jr., Ph.B.,	- - - - -
- - - - -	Union Trust Building, San Francisco
<i>Treasurer.</i>	
CHARLES EDWARD SNOOK, Esq.,	- - - - - 922 Broadway, Oakland
<i>Counsel.</i>	

## FACULTY.

BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University,  
ex-officio President of the Faculty.

ARNOLD A. D'ANCONA, A.B., M.D., Dean.

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and  
Operative Surgery.

GEORGE H. POWERS, A.M., M.D., Professor of Ophthalmology.

WM. WATT KERR, A.M., M.B., C.M., Professor of Clinical Medicine.

DOUGLASS W. MONTGOMERY, M.D., Professor of Dermatology.

JOHN M. WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and  
Practice of Surgery.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

CHAS. A. VON HOFFMANN, M.D., Professor of Gynecology.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and  
Practice of Medicine.

JOSEPH MARSHALL FLINT, B.S., A.M., M.D., Professor of Anatomy.

WM. B. LEWITT, M.D., Professor of Pediatrics.

JACQUES LOEB, M.D., Professor of Physiology.

THOS. W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

IRVING HARDESTY, A.B., Ph.D., Assistant Professor of Anatomy.

JOHN BRUCE MACCALLUM, A.B., M.D., Assistant Professor of  
Physiology.

ALFRED B. SPALDING, M.D., Assistant Professor of Obstetrics.

JOHN C. SPENCER, M.D., Assistant Professor of Genito-Urinary  
Surgery.

BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.

J. HENRY BARBAT, Ph.G., M.D., Instructor in Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Therapeutics.

HENRY A. L. RYFKOGEL, M.D., Instructor in Pathology.

HAROLD BRUNN, M.D., Instructor in Surgery.  
 CLARENCE QUINAN, M.D., Instructor in Medicine.  
 GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
 WALLACE I. TERRY, M.D., Instructor in Surgery.  
 PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.  
 ALBERT B. MCKEE, Ph.M., M.D., Instructor in Diseases of Ear,  
 Nose and Throat.  
 HENRY B. A. KUGELER, M.D., Instructor in Surgery.  
 SANFORD BLUM, A.B., M.D., Instructor in Pediatrics.  
 SAMUEL STEEN MAXWELL, Ph.D., Instructor in Physiology.  
 ROBERT ORTON MOODY, B.S., M.D., Instructor in Anatomy.  
 RAYMOND RUSS, B.S., M.D., Instructor in Surgery.  
 FRED GRANT BURROWS, A.M., M.D., Assistant in Medicine.  
 CHAS. M. COOPER, M.R.C.S. Eng., Assistant in Medicine.  
 ALFRED NEWMAN, A.B., M.D., Assistant in Surgery.  
 CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.  
 GEORGE W. MERRITT, M.D., Assistant in Ophthalmology.  
 HOWARD MORROW, M.D., Assistant in Dermatology.  
 CHESTER H. WOOLSEY, B.S., M.D., Assistant in Medicine.  
 LEWIS S. MACE, A.B., M.D., Assistant in Surgery.  
 TRACY G. RUSSELL, A.B., M.D., Assistant in Surgery.  
 WILLIAM G. MOORE, M.D., Assistant in Gynecology.  
 E. L. WEMPLE, JR., M.D., Assistant in Genito-Urinary Surgery.  
 CARL S. G. NAGEL, M.D., Assistant in Ophthalmology.  
 JAMES T. WATKINS, M.D., Assistant in Surgery.  
 HERBERT ALLEN, A.B., M.D., Assistant in Clinical Pathology.  
 ANNA M. FLYNN, M.D., Assistant in Ophthalmology.  
 J. WILSON SHIELDS, M.D., Assistant in Medicine.  
 THEODORE C. BARNETT, M.D., Assistant in Physiology.  
 T. BRADFORD ROBERTSON, B.S., Assistant in Physiology.  
 L. W. ALLEN, M.D., Assistant in Surgery.  
 RAWLINS CADWALLADER, M.D., Assistant in Obstetrics.  
 A. J. LARTIGAU, M.D., Assistant in Pediatrics.  
 HARRY P. ROBARTS, M.D., Assistant in Surgery.  
 CAMILLUS BUSH, B.S., M.D., Assistant in Surgery.  
 JACOB SCHWARTZ, M.D., Assistant in Surgery.  
 GEORGE BLUMER, M.D., Assistant in Medicine.  
 RACHEL L. ASH, B.S., M.D., Assistant in Medicine.  
 MILTON B. LENNON, A.B., M.D., Assistant in Medicine.  
 HAROLD P. HILL, M.D., Assistant in Medicine.

## LOCATION.

The Medical Department is located in the western part of San Francisco, at Second and Parnassus Avenues, south of Golden Gate Park. The main building has a frontage of 148 and a depth of 208 feet. Upon the ground floor are the students' lockers, the photographic and projection rooms, the anatomical preparation room, the laboratory of materia medica, storage rooms, janitor's quarters, and lavatories. Situated upon the second floor are the offices of administration, the library, the students' room, the laboratory of physiology, the laboratory of chemical pathology, and the private laboratories of pathology. The laboratories of chemical physiology, histology, morphological pathology and bacteriology, and a lecture room are upon the third floor, while the fourth contains eight dissecting rooms, the bone room, the anatomical museum and model collection, the private laboratories of anatomy and a lecture room.

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## REQUIREMENTS FOR ADMISSION.

All students desiring to enter the first year of the medical course and all new students seeking advanced standing must present evidence of having completed at least two full years of preliminary training in the undergraduate department of a college or university of recognized standing. Satisfactory evidence must also be presented that during these two years the applicant has completed courses of the following values:

**Chemistry.** (1) A course in general inorganic chemistry, including lectures, recitations, and laboratory work. *Lectures and recitations two or three hours; laboratory work five or six hours a week throughout one year.* In this course should be included the main facts of physical chemistry.

(2) Quantitative analysis. Gravimetric and volumetric. *Laboratory nine hours a week, one half-year.*

(3) Organic chemistry. A course of lectures, demonstrations, and recitations in organic chemistry. *Two hours a week, one half-year.*

Courses 1, 2, 3, 4, 5a, and 8 in the Department of Chemistry in the University of California cover the work outlined above, which constitutes the minimum required amount of chemistry.

**Physics.** (1) A course in general physics, including lectures, recitations, and laboratory work. *Seven hours per week throughout one year.*

(2) A laboratory course in physical measurements. *Six hours per week throughout one year.*

Courses 1 and 3 in the Department of Physics of the University of California cover the work outlined above, which constitutes the minimum required amount of physics.

**Biology.** (1) A general course in zoology, giving a knowledge of the main facts of biology, covering structure, life-history, and vital activities of selected types of animal life. The chief points of cytology and development, as well as a clear conception of the doctrine of descent, should also be given in this course. *Two hours a week throughout one year.*

(2) Laboratory work in zoology covering the points brought out in Course 1, with objectivity and the training of the powers of observation as its special features. Practice in the recording of scientific phenomena both by means of word description and drawings should also be given. *Six hours per week throughout one year.*

Courses 1a and 1b in the Department of Zoology in the University of California cover, in general, the minimum work required in biology.

**English.** A course in English composition consisting of consultation and theme work. *At least three hours per week throughout one year.*

**French and German.** Applicants must possess a reading knowledge of scientific French and German.

The standard in the required courses outlined above must correspond and be at least equal to those given in the academic department of the University of California.

It is suggested that students should also during their preliminary academic training take certain elective courses which would materially increase the efficiency of the preparation for their later work in medicine. Advanced mathematics, comparative anatomy, embryology, laboratory work in organic chem-

istry, and advanced work in physics covering the theory of solutions, are courses of this nature. Entering students, therefore, are urged to present them on admission with the required work. The adequate training of a physician certainly presupposes a knowledge of physics, chemistry, biology, and the modern languages as outlined above; but the need of a broad foundation in general culture can not be overestimated, and students should select from the curricula of their colleges as many courses as possible beyond those demanded and recommended by the Faculty of the Medical Department.

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#### ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second, third, and fourth year classes only upon examinations covering the subjects in which they seek to be accredited. They must first present to the administrative officer evidence that they have satisfied the regular matriculation requirements, and obtain from the Dean authorization for examination.

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#### JOINT COURSE IN NATURAL SCIENCE AND MEDICINE GRANTING IN SIX YEARS THE DEGREE OF B.S. AND M.D.

Students who satisfactorily complete the first two years of medicine are granted the degree of B.S. in this University. This follows because the new requirements and the present pre-medical course are identical. This plan covers six years' residence in the University, two in the College of Natural Sciences of Berkeley, and four in the Medical School in San Francisco. The members of the Medical Department teaching the scientific branches are *ipso facto* members of the Faculty of the College of Natural Sciences, and on satisfactory completion of the first two years of the medical course, this Faculty recommends the student for the degree of Bachelor of Science.

The requirements for entrance in this course are those of the College of Natural Sciences, except that in Subject 12, mathematics and chemistry must be offered. Prospective students who contemplate taking this course are advised to present, likewise,

additional credits in modern languages and mathematics. The following is an outline of the course in the College of Natural Sciences at Berkeley covering a period of two years:

	Units.
English .....	4
French .....	6
German .....	6
Mathematics .....	6
Physics .....	12
Chemistry .....	15
Zoology .....	15
Military Science and Physical Culture .....	4
Electives—To be determined, as to amount and subjects for each student, by the Joint Committee of the Academic and Medical Faculties.	—
Total .....	68

The details concerning the extent and scope of these courses can be found in the new entrance requirements for the Medical Department, in which their content and aim are briefly described. Since the two years' work in the College of Natural Sciences is largely spent in prescribed work, little time is allowed for other subjects in general culture; and as students are urged to elect such courses, this can best be done by extending their period of residence in the collegiate department to three years.

Students intending to take the course should enter upon it at the beginning of the freshman year. They should also seek the advice of the chairman or some other member of the Joint Committee of the Academic and Medical Faculties before making out their schedule of studies for the first term of the freshman year.

After the completion of their work in the Academic Department in Berkeley, students enter the Medical School to complete the studies leading up to the bachelor's degree. These consist of

	Units.
Anatomy .....	38
Physiology .....	19
Pathology .....	18
	—
Total .....	75



The work of these courses is described in detail in another part of this announcement.

After receiving the bachelor's degree, students enter upon the two years' study of the clinical branches of medicine, and upon satisfactory completion of these are granted the degree of Doctor of Medicine.

Special note should be taken by all students looking to the study of medicine in this University, that the preliminary course here described is in its essentials the only preparation that will admit to the clinical branches of medicine. Those, therefore, who are enrolled in the College of Letters or Social Sciences, or in any of the technical colleges, and desire to study medicine, will need to supplement the usual courses in these colleges by such essentials of the course here outlined (French, German, Physics, Chemistry, and Biology) as may not have been included in their original schedules.

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#### HOSPITAL APPOINTMENTS.

The position of interne, or House Physician and Surgeon, in the City and County Hospital, is open each year to six members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year and have opportunities for obtaining an invaluable experience in various fields of medicine and surgery. Three begin their term of service July 1st and three January 1st, each serving an entire year. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the Medical Department or by competitive examination.

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#### BOARDING.

The expense of living in San Francisco is not great. Good board with room rent may be procured at the rate of \$5.00 per week at a convenient distance from the College building.

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#### CLINICAL FACILITIES IN SAN FRANCISCO.

The clinical work of the Medical Department is given in the Out-Patient Dispensary, which is situated on New Montgomery

Street, in a densely populated district of the city, and has a large clientele of patients of the poorer class. The dispensary is open from 9 a. m. until 6 p. m. each day, and students of the third and fourth years have practical instruction upon the various ambulatory cases that present themselves for treatment. The ward work and clinics are held in the wards of the City and County Hospital, where an abundance of material of all sorts is obtained for the work in medicine, surgery, and gynecology. The medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department. In the near future, however, it is to be hoped that some liberal-minded citizen will make a donation for a University Hospital which will be completely under the control of the institution and where even more extensive opportunities for bedside instruction can be given to the students during their clinical years.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

Thus far none of the numerous private hospitals has been available for medical instruction, but it is hoped that their directors may soon throw open their wards for the use of the students.

The municipality has determined to erect a new City and County Hospital on the pavilion system, which will be modern in every respect and will provide improved laboratory and clinical facilities for medical students.

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#### FEES.

##### *First Year.*

Matriculation .....	\$ 5 00
Tuition .....	150 00
Dissecting material .....	12 00

The fees are payable at the time of matriculation.

A key and breakage deposit of \$25.00 is required for the use of lockers and to cover cost of material used in the laboratories

and damage to college buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5.00 a year is charged for the use of a microscope, and \$2.00 for an immersion lens. Each student must provide himself with a microscope.

A rental of \$2.50 is charged for the use of a set of bones and a deposit of \$7.50 as security for their return in good condition.

#### *Second Year.*

Tuition .....	\$150 00
Dissecting material .....	14 00
A key and breakage deposit of.....	25 00

#### *Third Year.*

Tuition .....	\$150 00
A key and breakage deposit of.....	10 00

#### *Fourth Year.*

Tuition .....	\$150 00
Graduation .....	25 00
A key and breakage deposit of.....	10 00

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### LIBRARY.

The library and reading room of the Medical Department is on the first floor of the main building and contains about 3,000 volumes. The catalogue shows that there are on the shelves many of the current text-books and some of the better monographs. Along certain lines the library is particularly strong and it will be the policy of the department by frequent purchases to make the collections uniform and to obtain as soon as possible complete files of the more important periodicals published in English, French, and German. Among the journals in the library are the following, with the exception of occasional missing volumes, the sets of which are complete:

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anatomische Hefte, Annals of Surgery, Archiv für Anatomie und Entwicklungsgeschichte, Archiv für Entwicklungsmechanik der Organismen, Archiv für Klinische Chirurgie, Archiv für Patho-

logische Anatomie und Physiologie, Archives of Surgery, Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berliner Klinische Wochenschrift, Boston Medical and Surgical Journal, British Medical Journal, Centralblatt für Bakteriologie und Parasitenkunde, Centralblatt für Chirurgie, Centralblatt für Gynecologie, Centralblatt für Klinische Medizin, Congrès Français de Chirurgie, Deutsche Medicinische Wochenschrift, Ergebnisse der Anatomie und Entwicklungsgeschichte, Fortschritte der Medizin, Jahrbücher der Gesamten Medizin, Jahresbericht der Gesamten Medizin, Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte, Jahresbericht über die Fortschritte der Anatomie und Physiologie, Jahresbericht über Pathogenen Mikroorganismen, Journal of the American Medical Association, Journal of Comparative Neurology, Journal of Experimental Medicine, Journal of Hygiene, Journal of Medical Research, London Lancet, Medical Record, Medical Review of Reviews, Morphologische Arbeiten, New York Medical Journal, Philadelphia Medical Journal, Revue de Chirurgie, Transactions of American Surgical Association, Verhandlungen der Deutschen Gesellschaft für Chirurgie, Wiener Medizinische Wochenschrift, Zeitschrift für Chirurgie, Zeitschrift für Morphologie und Anthropologie.

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## ORGANIZATION OF INSTRUCTION.

### Session of 1905-06.

**Summary of Courses.** In conformity with the practice of the University, instruction is divided into three classes—didactic, demonstrative and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory sessions, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value. This is likewise the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the

instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated. The advantages of concentration are many. The system offers more work to the student and is conducive to favorable conditions of study, in that students in the prolonged and consecutive periods apply themselves better and enter more deeply into the subject. It also grants to the student much more free time, time of the greatest value for purposes of private study or advanced work.

It is believed that the students on account of this free time will take advantage of the elective courses offered by the departments of anatomy, physiology, and pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

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#### CLASS STANDING AND EXAMINATIONS.

For the determination of class standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendations for Internships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the student and observation of their routine work, by oral examina-

tions, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

*First Year*.—Microscopic anatomy, chemical physiology, elementary physiology.

*Second Year*.—Systematic human anatomy (including embryology), general physiology, morphological pathology, chemical pathology, and bacteriology.

*Third Year*.—Therapeutics, materia medica, obstetrics, and general surgery.

*Fourth Year*.—Internal medicine, clinical medicine, general surgery, clinical surgery, gynecology, operative obstetrics, and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that more than one condition can not be carried into the second, third, or fourth year, and this must be passed in order to render the student eligible for the examinations held at the end of that session. Under all circumstances, however, prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for re-examination at the beginning of the next academic year or be required to repeat the course. The Faculty reserves the right to sever at any time the connection of any student with the Medical Department for what it deems either mental or moral unfitness for a career in medicine.

### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.
3. He must have done the required work and passed the stated examinations.
4. He must have paid in full the college fees.

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### COURSES OF INSTRUCTION.

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#### ANATOMY.

\*JOSEPH MARSHALL FLINT, M.D., Professor of Anatomy.  
IRVING HARDESTY, Ph.D., Assistant Professor of Anatomy.  
ROBERT ORTON MOODY, M.D., Instructor in Anatomy.  
EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in the Hearst Anatomical Laboratory, which occupies rooms on several floors in the main medical building. The laboratories of the department have been entirely rebuilt and newly equipped. On the top floor are eight small dissecting rooms with capacity for from one to three tables each. The rooms are lighted from the ceilings, well ventilated, and fitted with special reference to the effect of a clean and pleasant environment upon the work of the students. The classes are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins at any desired pressure.

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\*Absent on leave, 1905-1907.

After this process is completed the bodies are preserved in wood alcohol vapor or a carbolic solution.

The teaching museum, consisting of specially prepared cor-rosions, injections, dissections, and models, is located in a large hall near the dissecting rooms.

The laboratory for microscopic anatomy is very large and has abundant north light. It is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system by which a certain amount of selection is allowed in the regular work of the department.

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### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology; (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections; (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student has a typical set of comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize him with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding



in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with laboratory drawings and contain an epitome of the student's notes and collateral reading.

1. **Histology.**

PROF. HARDESTY.

In this course the anatomy of the cell, its variations in form, the conditions and processes of its proliferation and the modifications which result in its differentiation into a cell of specialized type are considered. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as they are composed of cells and cell products and derived from one or the other of the germ layers. The study is always comparative.

First year, 4 laboratory periods, 4 lectures per week, for 9 weeks.  $3\frac{1}{3}$  units.

2. **Microscopic Organology.**

PROF. HARDESTY.

The organs are discussed with reference to the form, arrangement, and number of the fundamental tissues composing them, with special reference to the structural and functional relations to other organs. In each case the student begins first with the tissue in situ, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 4 laboratory periods, 4 lectures per week, for 9 weeks.  $3\frac{1}{3}$  units.

3. **Neurology.**

PROF. HARDESTY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with the view to tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

Four lectures, 4 laboratory periods per week, for 9 weeks.  $3\frac{1}{3}$  units.

## SYSTEMATIC HUMAN ANATOMY.

The courses in systematic anatomy are given by practical work entirely. There are no lectures or quizzes. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

4. **Osteology.**

DR. MOODY.

Each student is loaned a skeleton and is required to model in clay and draw each bone in the body.

First year, 6 half days per week, for 8 weeks.  $4\frac{2}{3}$  units.

5. **Head and Neck.**

DR. MOODY and — —.

First year, 6 half days per week, for 7 weeks.  $4\frac{2}{3}$  units.

6. **Arm and Thorax.**

DR. MOODY and — —.

First year, 6 half days per week, for 7 weeks.  $4\frac{2}{3}$  units.

7. **Leg and Abdominal Viscera.**

DR. MOODY and — —.

First year, 6 half days per week, for 7 weeks.  $4\frac{2}{3}$  units.

In his second year the student must repeat at least two of Courses 5, 6, and 7, provided they have already dissected the entire body in their first year. Research will be accepted in lieu of these courses.

8. **Special Anatomy for Physicians and Advanced Students.**

DR. MOODY.

This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis, and abdominal viscera. The work is largely independent. A limited number of regular stu-

dents will be permitted to take this course as an elective after finishing the required work of the department.

Hours arranged to suit applicants. 4-8 units.

9. **Research.**

PROF. HARDESTY and DR. MOODY.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. A certain number of units in Course 9 will be accepted in lieu of the required systematic anatomy of the second year from students who have shown marked ability in their work.

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PHYSIOLOGY.

JACQUES LOEB, M.D., Professor of Physiology.

JOHN B. MACCALLUM, A.B., M.D., Assistant Professor of Physiology.

SAMUEL STEEN MAXWELL, Ph.D., Instructor in Physiology.

THEODORE C. BARNETT, M.D., Assistant in Physiology.

T. BRADFORD ROBERTSON, B.S., Assistant in Physiology.

The courses in Physiology are given during the first and second years.

FIRST YEAR.

1. **Lectures in Physiology.**

DR. MAXWELL.

The lectures will cover the main facts in the physiology of the blood and circulation, respiration, absorption, secretion, and muscle nerve physiology.

4 lectures a week, for 9 weeks.

2. **Laboratory Work in Physiology.**

DRS. MAXWELL and ROBERTSON.

In connection with Course 1.

3 three-hour laboratory periods a week, for 9 weeks.

SECOND YEAR.

3. **Lectures in Physiology.**

PROF. MACCALLUM.

Physiology of the central and peripheral nervous systems and the senses.

4 lectures a week, for 9 weeks.

**4. Laboratory Work in Physiology.**

PROF. MACCALLUM and DR. BARNETT.

In connection with Course 3.

3 three-hour laboratory periods a week, for 9 weeks.

**5. Chemical Physiology.**

Lectures on the chemical composition of the body, and on digestion, nutrition and metabolism.

5 lectures per week, 9 weeks.

**6. Laboratory Course in Chemical Physiology.**

Laboratory work on the subjects covered in 5.

15 hours per week, 9 weeks.

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PATHOLOGY.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

H. A. L. RYFKOGEL, M.D., Instructor in Pathology.

WILLIAM T. JANE, Technical Assistant.

Instruction in pathology is given in the Hearst Laboratory of Pathology during the second year, and at the City and County Hospital during the fourth year. The courses consist entirely of laboratory work; formal didactic teaching is not employed. The instruction consists of individual work upon the part of the student, supplemented by such demonstrations and discussions as are considered necessary to fix and amplify the knowledge gained in first-hand study. The inductions, the theoretical and practical relations, and the numerous general considerations in pathology are brought into the course in the form of daily lectures that are opportune by virtue of the particular practical work in hand. It is believed that this correlation of general pathology to concrete laboratory work is more effective than a formal didactic course, and more rapidly develops the scientific independence of the student. Since adequate equipment is a *conditio sine qua non* of rapid and sustained work, the students' laboratories have been equipped with the best instruments and apparatus of latest design. It is the principle of instruction in this department to bring the student into a contemplation of pathology from the biological point of view, since only from this standpoint can the scope and dignity of the science and its relations to hygiene and preventive

medicine be adequately understood and valued. Properly studied, pathology forms the substratum of clinical medicine, and many of the manipulations employed in pathological studies are indispensable to the practice of medicine. A knowledge of pathology not only endows the student with conceptions of the nature of disease, but also trains in the diagnosis of disease.

### 1. **Morphological Pathology.**

PROF. TAYLOR and —.

The course includes instruction upon the chief organs and tissues in the order of their importance. It is realized that the entire subject can not be covered, and in lieu of such an attempt the principal lesions of the more important organs and tissues are studied in an exhaustive manner. Throughout the course emphasis is placed upon the importance of acquiring accurate visual images of the lesions. In the study of the lesions of disease the students are taught to found their observations upon an ultimate analysis of tissue units upon the basis of cytology and microscopic anatomy. From the results of these ultimate analyses the student will build up the groupings which constitute pathological lesions, thus avoiding all confusion of theoretical classifications and didactic schemata. The gross lesions are demonstrated in the fresh state and upon Kaiserling preparations from the museum. In the study of etiology, the experiment is employed whenever feasible and advantageous. Inflammation, in its various phases, is studied largely from the experimental point of view. Systematic reports and original drawings are regular portions of the work.

4 lectures, 12 hours laboratory work per week, 18 weeks, 8 units.

Prerequisite: Completion of the course in first year histology and microscopic anatomy.

### 2. **Chemical Pathology.**

PROF. TAYLOR.

In this course disease is studied from the point of view of disturbed functionation; this and the previously detailed course contrast pathological physiology with pathological anatomy. Physico-chemical biology is becoming daily of greater importance, and upon its study depends the comprehension of the nature of many diseases and their progressions, this being particularly true of the micro-organisial infections and the metabolic diseases. The courses includes the chemical study of the organs and tissues of the body in

various diseases, of bacterial processes, of exudates and transudates, and of the gastric contents, the feces and the urine.

5 lectures, 15 hours laboratory work per week, 9 weeks. 5 units.

Prerequisite: Completion of the first year course in chemical physiology.

### 3. **Bacteriology.**

DR. RYFKOGEL.

The first portion of the course consists in the study of microbiology. Micro-organisms of many types and kinds, both saprophytic and pathogenic, are exhaustively studied. Following this the students are instructed in the narrower domain of bacteriological pathology, with particular reference to bacterial intoxication and immunity. The infections are studied in original lesions and by experiment, and the relations of micro-organisms to general and special pathological conditions are thus elucidated.

5 lectures, 15 hours laboratory work per week, 9 weeks. 5 units.

Prerequisite: Completion of the first year course in histology and microscopic anatomy.

### 4. **Autopsy Course.**

PROF. TAYLOR.

During the fourth year an autopsy course is conducted in the City and County Hospital. The members of the fourth year class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students.

Two sections of 1 semester each, 4 hours per week, except in the event of absence of material. 1 unit.

### **Research Department of Hearst Pathological Laboratory.**

The private laboratories of pathology are installed with equipments for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

## THERAPEUTICS.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Therapeutics.

1. **Physiological Action of Drugs.** DR. SIMMONS.

The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.

Third year, 2 hours per week, 27 weeks. 3 units.

2. **Materia Medica and Pharmacy.** DR. SIMMONS.

The course is purely practical, embracing the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

## MEDICINE.

WILLIAM WATT KERR, M.D., Professor of Clinical Medicine.

HERBERT C. MOFFITT, M.D., Professor of the Principles and Practice of Medicine.

CLARENCE QUINAN, M.D., Instructor in Medicine.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.

J. WILSON SHIELDS, M.D., Assistant in Medicine.

FRED G. BURROWS, M.D., Assistant in Medicine.

CHARLES M. COOPER, M.D., Assistant in Medicine.

CHESTER H. WOOLSEY, M.D., Assistant in Medicine.

GEORGE BLUMER, M.D., Assistant in Medicine.

HAROLD P. HILL, M.D., Assistant in Medicine.

RACHEL L. ASH, B.S., M.D., Assistant in Medicine.

MILTON B. LENNON, A.B., M.D., Assistant in Medicine.

Instruction in medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the methods of diagnosis, and in the rational employment of therapeutics. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and therefore properly requires a

large portion of the time of the student. The general plan of the department is to ground the students in the fundaments of medicine during the third year, and during the fourth year to place the students upon individual practical work.

1. **Physical Diagnosis.** DR. EBRIGHT and Hospital Internes.

This course is given in the wards of the City and County Hospital, and consists in a review of the topographical anatomy of the viscera, in systematic instruction in inspection, palpation, percussion, auscultation, and in the adjuncts to physical diagnosis. The class is divided into sections, insuring individual instruction.

Third year, 3 hours a week, 1 semester. 1 unit.

2. **Dispensary Clinics.** DRS. HULL, ASH and LENNON.

The class is divided into sections and the students are brought into direct contact with the patients. The students are systematically instructed in the taking of histories, in the general and special examinations of the sick, and in treatment.

Third year, 4 hours a week throughout the year. 2½ units.

3. **Clinics in Internal Medicine.** PROF. KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures and demonstrations upon the abundant material in the medical ward of the City and County Hospital. Students are assigned to the beds for the study of individual cases.

3 hours a week through 2 years. 6 units.

4. **Clinics on Medicine.** PROF. MOFFITT.

Clinical work at Out-Patient Department.

Third and fourth years, 2 hours a week through 2 years. 8 units.

5. **Bedside Instruction.**

PROF. KERR, DRS. EBRIGHT, BURROWS, BLUMER, COOPER and WOOLSEY.

The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of



disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well-equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies.

Fourth year, 2 hours per week through 1 semester.  $\frac{2}{3}$  unit.

**6. Clinical Course at the Out-Patient Department.**

PROF. MOFFITT.

Third and fourth year.

**7. Dispensary Clinics.**

DR. QUINAN.

The class is divided into sections, which attend the ambulatory clinics, where they are instructed in the examinations of patients, and in systematic study of internal diseases.

Fourth year, 1 hour per week.  $1\frac{2}{3}$  units.

**8. Lectures on Practical Therapeutics.**

DR. SHIELDS.

Third and fourth years, 2 hours a week. 8 units.

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**SURGERY.**

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

J. HENRY BARBAT, M.D., Instructor in Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

WALLACE I. TERRY, M.D., Instructor in Surgery.

RAYMOND RUSS, B.S., M.D., Instructor in Surgery.

ALFRED NEWMAN, M.D., Assistant in Surgery.

LEWIS S. MACE, M.D., Assistant in Surgery.

TRACEY G. RUSSELL, M.D., Assistant in Surgery.

HARRY P. ROBERTS, M.D., Assistant in Surgery.

CAMILLUS BUSH, M.D., Assistant in Surgery.

H. B. REYNOLDS, M.D., Assistant in Surgery.

C. M. COOPER, M.D., Assistant in Surgery.

L. W. ALLEN, M.D., Assistant in Surgery.

JACOB SCHWARTZ, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years, and while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. Considerable clinical material is found in the wards of the City and County Hospital and numerous cases of minor surgery are received in the Out-Patient Dispensary on New Montgomery street. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course. Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, at which papers are read and discussed under the guidance of the professor of surgery. A similar meeting is conducted for the third-year class by one of the assistants.

**1. General Surgery.**

PROF. SHERMAN.

The principles of general surgery are discussed in the lectures illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

Third and fourth years, 2 hours a week through 2 years. 8 units.

**2. Clinical Surgery.**

PROF. HUNTINGTON and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment, and asepsis are discussed at the bedside. Especial attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures

the choice of anæsthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

Third and fourth years, 3 hours a week through the years. 6 units.

3. **Surgical Pathology.**

DR. BRUNN.

This course will present in a practical way the application of many of those points in the previous work in pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of microorganisms by means of the lymphatics through the lungs, liver and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical.

Third year, 12 hours a week, 9 weeks. 2 units.

4. **Operative Surgery on the Cadaver.**

DR. BARBAT.

The classical operations in the abdomen are performed by the students of the class individually, imitating as closely as possible the arrangement and technique of the operating room.

Fourth year, 2 hours a week, 9 weeks.  $\frac{1}{2}$  unit.

5. **Operative Surgery on the Cadaver.**

DR. KUGELER.

This is an extension of Course 4, in which the surgery of the extremities is studied by practical operations on the cadaver under the same technical arrangements as in Course 4.

Fourth year, 2 hours a week, 9 weeks.  $\frac{1}{2}$  unit.

6. **Wound Dressing, Minor Surgery and Bandaging.** DR. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

Third year, 3 hours a week, one-half year. 1 unit.

7. **Ward Classes.** DR. L. W. ALLEN.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

Fourth year, 2 hours a week through 1 semester.  $\frac{2}{3}$  unit.

8. **Surgical Dispensary.**

DRS. RUSS, ROBERTS, BUSH and SCHWARTZ.

This course is given upon the ambulatory material at the outpatient department and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

Third year, 6 hours a week; one term.

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MICROSCOPICAL AND CHEMICAL DIAGNOSIS.

PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.

HERBERT F. ALLEN, M.D., Assistant in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology, which are of assistance to the clinician in reaching a diagnosis. It aims to act as connecting link between the work of the preclinical and the clinical years.

1. **Microscopical and Chemical Diagnosis.**

DRS. BROWN and ALLEN.

This course serves as an introduction to the students' work in practical medicine and surgery and is given almost exclu-

sively by the laboratory method. A simple, effective, well-equipped, well-lighted laboratory accommodating one half the class is situated on the grounds of the City and County Hospital, from the wards of which material for the course is obtained. During the year routine instruction is given on the normal and pathological conditions of the blood, with thorough training in the various methods of its examination, such as the examination of fresh specimens, hæmaglobin estimations, and the study of dried and stained preparations. The anæmiæ following this and the condition of the blood in all diseases in which blood examinations tend to aid the clinician in his work are thoroughly considered. In every instance material for the class is obtained from cases in the wards. If these do not exist, specimens from the cabinet are used for purposes of instruction. Considerable time is devoted to a thorough study of the malarial blood, together with a life-history of the parasites and the modes of transmission of the diseases. The examination of the urine in various diseases forms an important part of the course, and for this purpose the newer and more effective methods are used. The examination of the sputum and feces in health and disease, together with a brief review of parasitology and the methods of diagnosis of parasitic diseases, are taken up with practical laboratory methods.

Through the courtesy of the officials at the Presidio the secretions and excretions of patients suffering from tropical diseases can be obtained for the use of the class. Considerable emphasis will be laid on this feature of the work, since the acquisition of our new insular territories has greatly increased the trade between California and the Orient, and thus renders essential the protection of the State from the introduction of various tropical diseases. This demands the thorough training of students in work of this kind.

The course concludes with a thorough analysis of the gastric secretions and contents, exudates and transudates.

Third year, 12 hours a week, 9 weeks. 2 units.

## OBSTETRICS.

ALFRED BAKER SPALDING, M.D., Assistant Professor of Obstetrics.

RAWLINS CADWALLADER, M.D., Assistant in Obstetrics.

The work of the Department of Obstetrics is given by lectures, quizzes, demonstrations and clinics. During the first half of the third year the special anatomy and physiology of the female pelvis and its contents are reviewed. Normal pregnancy, labor and the puerperium are described in detail. During the second half of the third year abnormal pregnancy, labor and the puerperium are discussed and the students are given individual bedside instruction in the diagnosis and care of pregnant, parturient and puerperal women. Throughout the year quizzes and demonstrations upon the subjects of the lectures are given for one hour each week. Questions of treatment are discussed and illustrated by means of charts, manikins and specimens. Attendance upon at least five women in confinement is required.

1. **Recitations in Obstetrics.**

DR. CADWALLADER.

One recitation each week throughout the year upon assigned work covering the topics under discussion in Course 2. 2 units.

2. **Lectures on Obstetrics.**

PROF. SPALDING.

Third year, 2 hours per week throughout the year. 4 units.

3. **Practical Obstetrics.**

PROF. SPALDING and Assistants at the S. F. Maternity.

During the last half of the second year students are assigned in rotation for a two-weeks service at the San Francisco Maternity. This institution is situated in one of the poorest districts of the city and cares for a large number of pregnant women. The students live at the Maternity for two weeks, examine pregnant women, attend confinements, make daily post-partum visits, and care for both mother and baby. The student work is carefully supervised by the head of this department and his assistants at the dispensary. Personal instruction is given in abdominal palpation and auscultation and in pelvimetry. Careful and extensive histories and records of the patients are made and published annually.

Third year, 2 weeks for each student, second semester. 1 unit.

**4. Ward Classes.**

DR. CADWALLADER.

The maternity ward at the City and County Hospital is available for the instruction of university students for three months each year. During this time students are sent for to attend confinements and one clinic is given each week.

Optional for fourth-year students.

**5. Summer Courses.**

PROF. SPALDING and Assistants at the S. F. Maternity.

From May 15 to Aug. 15 courses lasting two weeks, similar to Course 3, are open to graduate and undergraduate students of any college who present satisfactory evidence of having completed the equivalent of Courses 1 and 2. Application for these courses for the summer of 1906 must be made in writing before May 1, 1906. In each course the student will examine from four to ten pregnant women, attend a similar number of confinements and make from thirty to forty post-partum visits. Personal instruction in the diagnosis of pregnancy including pelvimetry and cephalometry, in the management of normal and abnormal labors and in the care of mother and infant will be given by a competent corps of instructors. Lodging is furnished by the Maternity. Fee payable to the treasurer of the San Francisco Maternity, \$10.00. Breakage fee, returnable at the completion of the course, \$5.00.

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**GYNECOLOGY.**

CHARLES A. VON HOFFMANN, M.D., Professor of Gynecology.

BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.

WILLIAM G. MOORE, M.D., Assistant in Gynecology.

Instruction in gynecology is given during the third and fourth years. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

**1. Clinics in Gynecology.**

PROF. VON HOFFMANN and DR. MOORE.

This course is given upon the material in the wards of the City and County Hospital. The Clinic is combined with some

bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course, instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

Fourth year, 2 hours a week throughout the year. 2 units.

**2. Lectures in Gynecology.**

DR. LARTIGAU.

A systematic course of lectures, combined with practical demonstrations illustrating the normal gross and microscopic anatomy, pathology and symptomatology. Especial emphasis is laid upon pathological work in this course.

Third year, 1 hour a week throughout the year. 2 units.

**3. Dispensary Clinics.**

PROF. VON HOFFMANN and DR. MOORE.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

Fourth year, 18 hours for each section.  $\frac{1}{3}$  unit.

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**MEDICAL JURISPRUDENCE.**

**Lectures on Medical Jurisprudence.**

DR. D'ANCONA.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death and the jurisprudence of insanity.

Third year, 1 hour a week, second term.



## ELECTIVES.

The elective clinical branches which are offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery, and orthopedic surgery. Instruction in the general aspects of the diseases of children and of the nervous system is comprised in the work of the department of medicine. This general work is, in the elective subjects of pediatrics and clinical neurology, supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the department of surgery. This general work is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose, and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature. It is the intention of the Faculty in the near future to increase the electives in the clinical as well as in the preclinical years.

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PEDIATRICS.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, M.D., Instructor of Pediatrics.

A. J. LARTIGAU, M.D., Assistant in Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences and practical work in the Out-Patient Dispensary. The dispensary, located in a densely populated section of the City, affords an extremely favorable field for the observation of the diseases peculiar to children.

**1. Lectures and Recitations.****PROF. LEWITT.**

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

Fourth year, 1 hour a week throughout the year. 2 units.

**2. Dispensary Clinics.**

DR. BLUM and DR. LARTIGAU.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

Fourth year, 2 hours a week throughout the year. 1½ units.

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## DISEASES OF THE SKIN.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HOWARD MORROW, M.D., Assistant in Diseases of the Skin.

**1. Diseases of the Skin.** PROF. MONTGOMERY and DR. MORROW.

The instruction in the department consists in:

- (a) A review of the histology and microscopic anatomy of the skin.
- (b) The study of the pathology and bacteriology of the various cutaneous lesions. So far as possible the instruction in this aspect of the subject is carried parallel to the clinical study of individual cases. In the event of the absence of direct clinical material bearing upon any particular disease, this plan is supplemented by the demonstration and examination of museum specimens and collected tissues.
- (c) *Practical work in the dermatological clinic.* Instruction is founded upon the anatomy and pathology, as elucidated in the previous sections. The work is purely practical and individual; no didactic teaching is included.

Fourth year, 2 hours a week throughout the year. 2 units.

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## CLINICAL NEUROLOGY.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

The course of instruction in diseases of the nervous system comprises lectures, clinics, demonstrations, and practical work. It is the plan of the department to introduce students into the specialized work in nervous diseases.

**1. Clinic in Neurology.**

PROF. NEWMARK.

The work in this course is entirely practical and covers the exhibition of selected dispensary cases and the training

of students in the methods of conducting physical examinations on neurological cases and in testing the reactions of degeneration, sense, and perception. Patients suffering from various diseases of the nervous system are shown, questions of diagnosis and prognosis considered, followed by a discussion of the pathological lesions shown by these patients. These discussions are illustrated by numerous pathological specimens prepared by the newer neurological methods.

Fourth year, 1 hour per week throughout the year. 1 unit.

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### DEPARTMENT OF OPHTHALMOLOGY.

GEORGE HERMAN POWERS, M.D., Professor of Ophthalmology.

GEORGE W. MERRITT, M.D., Assistant in Ophthalmology.

CARL S. G. NAGEL, M.D., Assistant in Ophthalmology.

ANNA M. FLYNN, Assistant in Ophthalmology.

Instruction in ophthalmology is given at the City and County Hospital and at the Out-Patient Dispensary. Operative cases are shown at the hospital, while valuable material for diagnosis and treatment is obtained from the ambulatory cases at the dispensary.

#### 1. Ophthalmology.

PROF. POWERS, AND DRS. MERRITT, NAGEL, AND FLYNN.

In this course the pathology, diagnosis, and treatment of the diseases of the eye are covered by means of lectures and practical work.

Fourth year, 3 hours a week throughout the year, 1 lecture, 2 hours practical work per week.  $3\frac{1}{2}$  units.

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### OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

ALBERT B. MCKEE, M.D., Instructor of Diseases of the Ear, Nose, and Throat.

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated at the clinic at the City and County Hospital.

**1. Otology, Rhinology, and Laryngology.**

DR. MCKEE.

Clinic and dispensary course.

Fourth year, 3 hours a week throughout the year, 1 hour clinic,  
2 hours practical work one-half year.  $1\frac{2}{3}$  units.

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## DEPARTMENT OF GENITO-URINARY SURGERY.

JOHN MARSHALL WILLIAMSON, M.D., Professor of Genito-Urinary  
Surgery.

JOHN C. SPENCER, M.D., Assistant Professor of Genito-Urinary  
Surgery.

CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.

E. L. WEMPLE, JR., M.D., Assistant in Genito-Urinary Surgery.

Instruction in genito-urinary surgery is given at the Out-Patient Dispensary. A large number of cases illustrating the various diseases of the genito-urinary tract pass under the observation of the class. Students are thoroughly drilled in the methods of diagnosis and the operative procedures required in the treatment of this class of patients.

**1. Genito-Urinary Surgery. PROF. WILLIAMSON and Assistants.**

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. A weekly clinic is also held in the wards of the City and County Hospital.

Four hours a week throughout the year, 1 clinic per week, 3 hours practical work. 3 units.

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## ORTHOPEDIC SURGERY.

----, Professor of Orthopedic Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

JAMES T. WATKINS, M.D., Assistant in Orthopedic Surgery.

1. **Orthopedic Surgery.**                      DRs. HUNKIN and WATKINS.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces.

Fourth year, 3 hours a week throughout the year. 2 units.

GRADUATES, 1905.

George Cummings Albee, B.S. (Beloit College).....	Berkeley
Edgar William Alexander, B.S. (Univ. of Cal.).....	Oakland
Coniah Leigh Bigelow, B.S. (Univ. of Cal.).....	San Francisco
James Clark Blair, A.B. (Univ. of Cal.).....	San Francisco
George A. Briggs.....	Elk Grove
William Franklin Cothran.....	San Jose
Ambrose Franklin Cowden.....	Forest Hill
Mary Tom De Haven.....	San Francisco
Harriette Buttler Harker, A.B. (Vassar College).....	Mill Valley
Herman Verplanck Hoffman, A.B. (St. Clara College)	San Francisco
William Kenney .....	Sespe
John William Peck.....	San Francisco
Oscar Charles Reeve.....	Berkeley
Louis Xavier Ryan, A.B. (St. Ignatius College).....	San Francisco
George Samuel Snyder.....	San Francisco
Eldridge Curtis Turner.....	Sacramento
John Irving Vickerson.....	Lodi

## MATRICULATES.

1904-05.

## Fourth Year Class.

George Cummings Albee, B.S. (Beloit College).....	Berkeley
Edgar William Alexander, B.S. (Univ. of Cal.).....	Oakland
Coniah Leigh Bigelow, B.S. (Univ. of Cal.).....	San Francisco
James Clark Blair, A.B. (Univ. of Cal.).....	San Francisco
Constantine Raphael Bricca, A.B. (St. Ignatius College)	
.....	San Francisco
George A. Briggs.....	Elk Grove
William Franklin Cothran.....	San Jose
Ambrose Franklin Cowden.....	Forest Hill
Mary Tom De Haven.....	San Francisco
Samuel Percy Hardy.....	Oakland
Harriette Buttler Harker, A.B. (Vassar College).....	Mill Valley
Herman Verplanck Hoffman, A.B. (St. Clara College)	San Francisco
William Kenney .....	Sespe
John William Peck.....	San Francisco
Louis Xavier Ryan, A.B. (St. Ignatius College)....	San Francisco
George Samuel Snyder.....	San Francisco
*Henry Brackett Staepoole.....	Winnipeg, Canada
Eldridge Curts Turner.....	Sacramento
John Irving Vickerson.....	Lodi

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\*Special student.

**Third Year Class.**

Alexander Adler, B.S. (Univ. of Cal.).....	San Francisco
Olive Violet Brasier.....	Butte, Montana
Antonio Menotti dal Piaz.....	San Francisco
Sidney Ray Dannenbaum.....	San Francisco
Alex Vincent Doran.....	San Francisco
William Cooper Eidenmüller, B.S. (Univ of Cal.).....	Berkeley
John Henry Franklin.....	Gilroy
Wilfred Bertram Hays.....	San Francisco
Georgie Mary Hood.....	San Francisco
George Graham Hunter.....	Bakersfield
Louise Mary Igo.....	San Francisco
Charles Breckenfeld Jones.....	Sacramento
Herman Kronenberg .....	San Francisco
David Joseph Mahan.....	Eureka
Richard Leon Ochsner.....	Sacramento
*Leo Lloyd Sexton.....	San Francisco
Gifford Lyne Sobey, A.B. (Stanford).....	San Francisco
Waid James Stone.....	San Francisco
Jackson Temple, Ph.G. (Univ. of Cal.).....	Santa Rosa
Joseph Thomas Wrenn.....	Placerville
Reuben Sylvester Zumwalt.....	Yuba City

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\*Special student.



**Second Year Class.**

*Frederick Madison Allen, A.B. (Univ. of Cal.)	Pomona
Archie Addison Alexander, A.B. (Univ. of Cal.)	Haywards
Elmer Wilgy Bingaman	Soledad
Wilfred Everett Bixby	Oakland
John Aloysius Clark, A.B. (St. Clara College)	Gilroy
Lloyd Alexander Craig	San Francisco
William Calhoun Dawson	Eldridge
Cornelius Thomas Devine, A.B. (St. Clara College)	Berkeley
Thomas Garfield Dodds	Kern City
Harry Emerson Foster	Oakland
Anna Maria Gutzwiller, B.S. (Univ. of Cal.)	St. Helena
Walter Orrin Howell	Hopland
James Harvey Johnston	Auckland, New Zealand
Alfred Dow Long	San Francisco
Charles Bradford McKee	Sacramento
Lester Newman, B.L. (Univ. of Cal.)	Oakland
Earl Emmet Ostrom	Marysville
Romilda Paroni, B.S. (Univ. of Cal.)	Berkeley
Charles Arthur Pauson, B.S. (Univ. of Cal.)	San Francisco
Edward August Peterson, B.S. (Univ. of Cal.)	Auburn
Mehitabel Clara Proctor	Berkeley
Otto Theodor Schulze, B.L. (Univ. of Cal.)	Dixon
Middleton Pemberton Stansbury, B.S. (Univ. of Cal.)	Chico
Thomas Albion Stoddard, B.S. (Univ. of Cal.)	Santa Barbara
Florence Mabel Sylvester, B.L. (Univ. of Minnesota)	Berkeley
Gavin James Telfer	San Jose
Allen Moore Walcott	Oakland

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\*Special student.

**First Year Class.**

*Gerald Anthony .....	Alameda
Lela June Beebe, A.B. (Stanford Univ.) .....	San Francisco
Le Roy Hewitt Briggs, Jr. ....	Oakland
Alexander Sterling Bunnell, B.S. (Univ. of Cal.) .....	Berkeley
*James Edward Burns .....	Sacramento
Sanford Warren Cartwright, Ph.G., B.S. (Univ. of Cal.) ..	Berkeley
Ensang Ching .....	Honolulu, H. I.
Herbert Jacob Cohn .....	Carson City, Nevada
Herbert McLean Evans, B.S. (Univ. of Cal.) .....	Modesto
Frank Edward Frates, B.S. (St. Mary's) .....	Ione
James Joseph Groom, Jr. ....	San Francisco
Leonard Edwin Hanson .....	Wallace, Idaho
Richard Warren Harvey, B.S. (Univ. of Cal.) .....	San Francisco
†Marian Osgood Hooker .....	Los Angeles
†Louis Philippe Howe .....	San Francisco
Samuel Nicholas Jacobs, B.S. (Univ. of Cal.) .....	Oakland
*Albert Gilman Kenyon .....	San Francisco
Frederick Clinton Lewitt .....	San Francisco
William Crawford Mackintosh .....	San Francisco
Thomas Drummond Mansfield, A.B. (Univ. of Cal.) .....	Haywards
*Latimer Augustus Jacob La Motte .....	La Motte, Maryland
Albert Manson Meads .....	Oakland
Wallace Longfellow Meyers, Ph.G. (College of Phys. and Surg., San Francisco) .....	San Francisco
Albert Barnes Miller .....	Crescent City
Jee Shin Fwe Pond Mooar .....	San Francisco

\*Not in regular attendance.

†Special student.

*Ernest Henry Nast.....	San Francisco
Robert Garfield Pearson, A.B. (Univ. of Washington)	
.....	Starbuck, Washington
Alvin Powell .....	Oakland
John Mead Stanley Richardson.....	Berkeley
Eric Julius Rosenstirn.....	San Francisco
*Wallace Beals Scotchler.....	Berkeley
*Doremus Platt Scudder.....	Berkeley
Robert Thomas Sutherland.....	Oakland

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\*Not in regular attendance.

UNIVERSITY OF CALIFORNIA  
MEDICAL DEPARTMENT

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ANNOUNCEMENT  
OF  
COURSES OF INSTRUCTION  
FOR THE ACADEMIC YEAR  
1906-1907

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BERKELEY  
THE UNIVERSITY PRESS  
1906

Letters of inquiry concerning the Medical Department should be addressed to Dr. A. A. D'ANCONA, Dean, Medical Department, University of California, San Francisco, Cal.

## CALENDAR.

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### 1906.

Aug. 6.—Undergraduate applications for admission and recommendations issued by the principals of accredited schools should be filed with the Recorder of the Faculties at Berkeley on or before August 6. This may be done by mail. Credentials from other universities and from secondary schools outside of California should be filed as early as possible.

Aug. 9.—Academic year begins.

Aug. 9-15.—Entrance examinations at Berkeley for the Academic and Medical Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before Wednesday, August 8. But applications for permits to be sent by mail should be made as far in advance of August 8 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

Aug. 13, 14, 15, 10 a.m. to 12 m.—Registration of students of the third and fourth year classes; payment of fees. In the Dean's office in the main building of the Medical Department in San Francisco.

Aug. 15.—Class work begins.

Sept. 10.—Admission Day: a holiday.

Nov. 29.—Thanksgiving Day: a holiday.

Dec. 23.—Christmas vacation begins.

### 1907.

Jan. 7.—Second term begins.

Feb. 22.—Washington's Birthday: a holiday.

March 23.—Charter Day: a holiday.

May 1.—Examinations begin.

May 15.—Term ends.

## REGENTS OF THE UNIVERSITY.

### REGENTS EX OFFICIO.

HIS EXCELLENCY GEORGE COOPER PARDEE, M.A., M.D., Sacramento  
*Governor, President of the Regents ex officio.*

HIS HONOR JOHN ALDEN ANDERSON, - - - Box 342, Sacramento  
*Lieutenant-Governor.*

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*Speaker of the Assembly.*

HON. THOMAS JEFFERSON KIRK, - - - - - Sacramento  
*State Superintendent of Public Instruction.*

HON. BENJAMIN FRANKLIN RUSH, - - - - - Suisun  
*President of the State Board of Agriculture.*

RUDOLPH JULIUS TAUSSIG, Esq., 3134 Sixteenth Street, San Francisco  
*President of the Mechanics' Institute.*

BENJAMIN IDE WHEELER, Ph.D., LL.D., 1820 Scenic Avenue, Berkeley  
*President of the University.*

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### APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

	†Term Expires.
ISAIAS WILLIAM HELLMAN, Esq., - - - - - Wells Fargo Nevada National Bank, San Francisco.	1918
CHESTER ROWELL, M.D., - - - - - Fresno.	1910
HON. JAMES ANDREW WAYMIRE, - - - - - Alameda.	1908
HON. CHARLES WILLIAM SLACK, Ph.B., LL.B., - - - - - 2224 Sacramento Street, San Francisco.	1910
JACOB BERT REINSTEIN, M.A., - - - - - 906 Ellis Street, San Francisco.	1912

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† Terms of Regents expire March 1.

JOHN ELIOT BUDD, A.B.,	- - - - -	1916
Stockton.		
MRS. PHOEBE APPERSON HEARST,	- - - - -	1914
Pleasanton.		
ARTHUR WILLIAM FOSTER, Esq.,	- - - - -	1916
Ferry Building, San Francisco.		
GARRET W. MCENERNEY, Esq.,	- - - - -	1920
1414 Post Street, San Francisco.		
CHARLES NORMAN ELLINWOOD, M.D.,	- - - - -	1908
2739 Pacific Avenue, San Francisco.		
CHARLES STETSON WHEELER, B.L.,	- - - - -	1906
2413 Washington Street, San Francisco.		
GUY CHAFFEE EARL, A.B.,	- - - - -	1918
12 McClure Street, Oakland.		
HON. JAMES WILFRED MCKINLEY, B.S.,	- - - - -	1906
254 South Broadway, Los Angeles.		
REV. PETER CHRISTOPHER YORKE, S.T.D.,	- - - - -	1912
1267 Sixteenth Avenue, Oakland.		
JOHN ALEXANDER BRITTON, Esq.,	- - - - -	1914
1100 O'Farrell Street, San Francisco.		
FREDERICK WILLIAM DOHRMANN, Esq.,	- - - - -	1920
1090 Page Street, San Francisco.		

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OFFICERS OF THE REGENTS.

HIS EXCELLENCY GEORGE COOPER PARDEE, M.A., M.D.,	Sacramento
<i>President.</i>	
VICTOR HENDRICKS HENDERSON, B.L.,	- - - - -
2345 Telegraph Avenue, Berkeley	
<i>Acting Secretary and Land Agent.</i>	
ISAIAH WILLIAM HELLMAN, Jr., Ph.B.,	- - - - -
Union Trust Building, San Francisco	
<i>Treasurer.</i>	
CHARLES EDWARD SNOOK, Esq.,	- - - - -
906 Broadway, Oakland	
<i>Counsel.</i>	



## FACULTY.

BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University,  
*ex officio* President of the Faculty.

ARNOLD A. D'ANCONA, A.B., M.D., Dean.

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and Oper-  
ative Surgery.

GEORGE H. POWERS, A.M., M.D., Professor of Ophthalmology.

WM. WATT KERR, A.M., M.B., C.M., Professor of Clinical Medicine.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

JOHN M. WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of Surgery.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

CHAS. A. VON HOFFMAN, M.D., Professor of Gynecology.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and  
Practice of Medicine.

JOSEPH MARSHALL FLINT, B.S., A.M., M.D., Professor of Anatomy.

WM. B. LEWITT, M.D., Professor of Pediatrics.

JACQUES LOEB, M.D., Professor of Physiology.

THOS. W. HUNTINGTON, A.B., M.D., Professor of Surgery.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.

IRVING HARDESTY, A.B., Ph.D., Assistant Professor of Anatomy.

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

ALFRED B. SPALDING, M.D., Assistant Professor of Obstetrics.

FRANK W. BANCROFT, Ph.D., Assistant Professor of Physiology.

JOHN C. SPENCER, M.D., Assistant Professor of Genito-Urinary Sur-  
gery.

WALLACE I. TERRY, M.D., Instructor in Surgery.

J. HENRY BARBAT, Ph.G., M.D., Instructor in Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Therapeutics.

HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

CLARENCE QUINAN, M.D., Instructor in Medicine.

GEORGE E. EBBRIGHT, M.D., Instructor in Medicine.  
 PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.  
 ALBERT B. MCKEE, Ph.M., M.D., Instructor in Diseases of Ear, Nose,  
 and Throat.  
 SANFORD BLUM, A.B., M.D., Instructor in Pediatrics.  
 SAMUEL STEEN MAXWELL, Ph.D., Instructor in Physiology.  
 RAYMOND RUSS, B.S., M.D., Instructor in Surgery.  
 ALFRED NEWMAN, A.B., M.D., Instructor in Surgery.  
 HOWARD MORROW, M.D., Instructor in Dermatology.  
 TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.  
 CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.  
 HERBERT ALLEN, A.B., M.D., Instructor in Clinical Pathology.  
 L. W. ALLEN, M.D., Instructor in Surgery.  
 J. WILSON SHIELDS, M.D., Instructor in Medicine.  
 CHAS. M. COOPER, M.R.C.S. Eng., Instructor in Medicine.  
 A. J. LARTIGAU, M.D., Assistant in Gynecology and Pediatrics.  
 FRED GRANT BURROWS, A.M., M.D., Assistant in Medicine.  
 CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.  
 CHESTER H. WOOLSEY, B.S., M.D., Assistant in Medicine.  
 WILLIAM G. MOORE, M.D., Assistant in Gynecology.  
 E. L. WEMPLE, Jr., M.D., Assistant in Genito-Urinary Surgery.  
 JAMES T. WATKINS, M.D., Assistant in Surgery.  
 ANNA M. FLYNN, M.D., Assistant in Ophthalmology.  
 THEODORE C. BURNETT, M.D., Assistant in Physiology.  
 T. BRAILSFORD ROBERTSON, B.S., Assistant in Physiology.  
 RAWLINS CADWALLADER, M.D., Assistant in Obstetrics.  
 HARRY P. ROBERTS, M.D., Assistant in Surgery.  
 CAMILLUS BUSH, B.S., M.D., Assistant in Surgery.  
 JACOB SCHWARTZ, M.D., Assistant in Surgery.  
 RACHEL L. ASH, B.S., M.D., Assistant in Medicine.  
 MILTON B. LENNON, A.B., M.D., Assistant in Medicine.  
 HAROLD P. HILL, M.D., Assistant in Medicine.  
 LIONEL S. SCHMITT, M.D., Assistant in Dermatology.  
 HARRY E. ALDERSON, M.D., Assistant in Dermatology.  
 FLORENCE MCCOY HILL, M.D., Assistant in Dermatology.

## REQUIREMENTS FOR ADMISSION.

Applicants for admission to the first year of the medical course and applicants for advanced standing must present evidence of having completed at least two full years of preliminary training in the undergraduate department of a college or university of recognized standing. Satisfactory evidence must also be presented that during these two years the applicant has completed courses of the following values:—

**Chemistry.** (1) A course in general inorganic chemistry, including lectures, recitations, and experiments. Lectures and recitations 3 hrs. In this course should be included the main facts of physical chemistry.

(2) Laboratory course. Qualitative analysis, 6 hrs. throughout the year.

(3) Quantitative analysis. Gravimetric and volumetric. Laboratory 9 hrs. a week, one half-year.

(4) Organic chemistry. A course of lectures, demonstrations, and recitations in organic chemistry. 2 hrs. a week, one half-year.

(5) Organic chemistry. Laboratory course, 9 hrs. a week, one half-year.

Courses 1, 3, 5, and 8B and 10A in the Department of Chemistry in the University of California cover the work outlined above, which constitutes the minimum required amount of chemistry.

**Physics.** (1) A course in general physics, including lectures, recitations, and laboratory work. 6 hrs. a week throughout one year.

(2) A laboratory course in physical measurements. 6 hrs. a week throughout one year.

Courses 1 and 2A in the Department of Physics of the University of California cover the work outlined above, which constitutes the minimum required amount of physics.

**Zoology.** (1) A general course in zoology, giving a knowledge of the main facts of biology, covering structure, life history, and vital activities of selected types of animal life. The chief points of cytology and development, as well as a clear conception of the doctrine of descent, should also be given in this course. 2 hrs. a week throughout one year.

(2) Laboratory work in zoology covering the points brought out in Course 1, with objectivity and the training of the powers of observation as its special features. Practice in the recording of scientific phenomena both by means of word description and drawings should also be given. 6 hrs. a week throughout one year.

(3) A course in embryology. 8 hrs. a week, one half-year.

Courses 1, 2, and 3 in the Department of Zoology, or 1 and 2 in the Department of Zoology and the course in Embryology in the Department of Physiology, in the University of California cover, in general, the minimum work required in zoology.

**English.** A course in English composition consisting of consultation and theme work. At least 3 hrs. a week throughout one year.

**French and German.** Applicants must possess a reading knowledge of scientific French and German.

The standard in the required courses outlined above must correspond and be at least equal to the standard of those given in the Academic Colleges of the University of California.

It is suggested that students should also during their preliminary academic training take certain elective courses which would materially increase the efficiency of their preparation for later work in medicine. Advanced mathematics, comparative anatomy, embryology, laboratory work in organic chemistry, and advanced work in physics covering the theory of solutions, are courses of this nature. Entering students, therefore, are urged to present them on admission with the required work. The adequate training of a physician certainly presupposes a knowledge of physics, chemistry, biology, and the modern languages as outlined above; but the need of a broad foundation in general culture can not be overestimated, and students should select from the curricula of their colleges as many courses as possible beyond those demanded and recommended by the Faculty of the Medical Department.

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### ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second, third, and fourth year classes only upon examinations covering the subjects in which they seek to be accredited. They must first present to the administrative officer evidence that they have satisfied the regular matriculation requirements, and obtain from the Dean authorization for examination.

### JOINT COURSE IN NATURAL SCIENCE AND MEDICINE LEADING TO THE DEGREES OF B.S. AND M.D.

The requirements for admission to this course are those of the *College of Natural Sciences*, provided that chemistry and advanced mathematics be offered. Prospective students who contemplate taking this course are advised to present, likewise, additional credits in modern languages and mathematics. The following is an outline of the course in the *College of Natural Sciences* at Berkeley covering a period of two years:—

	Units.
English, approximately .....	4
French, approximately .....	6
German, approximately .....	6
Mathematics, approximately .....	6
Physics, approximately .....	12
Chemistry, approximately .....	15
Zoology and Comparative Anatomy, approximately .....	15
Military Science and Physical Culture and Hygiene .....	9
	—
Total .....	73

Owing to the annual changes in the courses offered by the various academic departments of the University, the exact distribution of these units is left to the discretion of the Joint Committee of the Academic and Medical Faculties in order to provide an elastic system capable of conforming to these changes.

Students intending to take the course should enter upon it at the beginning of the freshman year. They should also seek the advice of the chairman or some other member of the Joint Committee before making out their schedule of studies for the first half of the freshman year.

After the completion of their work in the Academic Department in Berkeley, students enter upon the work of the first two years of the *College of Medicine* (also in Berkeley) to complete the studies leading to the bachelor's degree. These consist of:—

	Units.
Anatomy .....	38
Physiology .....	19
Pathology .....	18
	—
Total .....	75

The work of these courses is described in detail in another part of this announcement.

Upon the completion of the course in the College of Natural Sciences above outlined, together with the first two years in the College of Medicine (consisting of Anatomy, Physiology, Pathology, Bacteriology), students will be granted the degree of Bachelor of Science on the recommendation of the Faculty of Natural Sciences.

After receiving the bachelor's degree, students enter upon the two years' study of the clinical branches of medicine in San Francisco, and upon satisfactory completion of these are granted the degree of Doctor of Medicine.

Special note should be taken by all students looking to the study of medicine in this University, that the preliminary course here described is in its essentials the only preparation that will admit to the clinical branches of medicine. Those, therefore, who are enrolled in the College of Letters or Social Sciences, or in any of the technical colleges, and who desire to study medicine, will need to supplement the usual courses in these colleges by such essentials of the course here outlined (French, German, Physics, Chemistry, and Zoology) as may not have been included in their original schedules.

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#### LOCATION.

Beginning in August, 1906, the work of the first and second years of the medical course will be conducted at Berkeley. The lecture rooms and laboratories of the departments of Physiology and Pathology will be located in the Rudolph Spreckels Physiological Laboratory; those of the Department of Anatomy in East Hall.

The main building of the Medical Department, located in the western part of San Francisco, at Second and Parnassus avenues, south of Golden Gate Park, is devoted to the work of the third and fourth years.

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#### BOARDING.

The expense of living in San Francisco is not great. Good board with room rent may be procured at the rate of \$5 per week at a convenient distance from the College building.

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#### CLINICAL FACILITIES IN SAN FRANCISCO.

The ward work and clinics are held in the wards of the City and County Hospital, where an abundance of material of all sorts is obtained for the work in medicine, surgery, and gynecology.

The medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

The municipality has determined to erect a new City and County Hospital on the pavilion system, which will be modern in every respect and will provide improved laboratory and clinical facilities for medical students.

Practical instruction in ambulatory cases will be given in the main building of the Medical Department.

### HOSPITAL APPOINTMENTS.

The position of interne, or House Physician and Surgeon, in the City and County Hospital, is open each year to six members of the graduating class who recommend themselves to the Faculty by their diligence and general fitness for the appointments. Internes receive their board and lodging for one year and have opportunities for obtaining an invaluable experience in various fields of medicine and surgery. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the Medical Department or by competitive examination.

### FEES.

#### *First Year.*

Matriculation .....	\$5.00
Tuition .....	150.00
Dissecting material .....	12.00

The fees are payable at the time of matriculation.

A key and breakage deposit of \$25 is required for the use of lockers and to cover cost of material used in the laboratories and damage to College buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5 a year is charged for the use of a microscope, and \$2 for an immersion lens. Each student must provide himself with a microscope.

A rental of \$2.50 is charged for the use of a set of bones and a deposit of \$7.50 as security for their return in good condition.

*Second Year.*

Tuition .....	\$150.00
Dissecting material .....	14.00
A key and breakage deposit of .....	25.00

*Third Year.*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

*Fourth Year.*

Tuition .....	\$150.00
Graduation .....	25.00
A key and breakage deposit of .....	10.00

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LIBRARY.

The library contains about 3,000 volumes, including many of the current text-books and some of the better monographs. Along certain lines the library is particularly strong. It is the policy of the department to make the collections uniform and to obtain complete files of the more important periodicals published in English, French, and German. Among the journals in the library are the following:—

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anatomische Hefte, Annals of Surgery, Archiv für Anatomie und Entwicklungsgeschichte, Archiv für Entwicklungsmechanik der Organismen, Archiv für Klinische Chirurgie, Archiv für Pathologische Anatomie und Physiologie, Archives of Surgery, Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berliner Klinische Wochenschrift, Boston Medical and Surgical Journal, British Medical Journal, Centralblatt für Bakteriologie und Parasitenkunde, Centralblatt für Chirurgie, Centralblatt für Gynecologie, Centralblatt für Klinische Medizin, Congrès Français de Chirurgie, Deutsche Medicinische Wochenschrift, Ergebnisse der Anatomie und Entwicklungsgeschichte, Fortschritte der Medizin, Jahrbücher der Gesamten Medizin, Jahresbericht der Gesamten Medizin, Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte, Jahresbericht über die Fortschritte der Anatomie und Physiologie, Jahresbericht über Pathogenen Mikroorganismen, Journal of the American Medical Association, Journal of Comparative Neurology, Journal of Experimental Medicine, Journal of Hygiene, Journal of



Medical Research, London Lancet, Medical Record, Medical Review of Reviews, Morphologische Arbeiten, New York Medical Journal, Philadelphia Medical Journal, Revue de Chirurgie, Transactions of American Surgical Association, Verhandlungen der Deutschen Gesellschaft für Chirurgie, Wiener Medizinische Wochenschrift, Zeitschrift für Chirurgie, Zeitschrift für Morphologie und Anthropologie.

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## ORGANIZATION OF INSTRUCTION.

### Session of 1906-07.

**Summary of Courses.** Instruction is divided into three classes: didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory sessions, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value. This is likewise the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated. The advantages of concentration are many. The system offers more work to the student and is conducive to favorable conditions of study, in that students in the prolonged and consecutive periods apply themselves better and enter more deeply into the subject. It also grants to the student much more

free time, time of the greatest value for purposes of private study or advanced work.

It is believed that the students on account of this free time will take advantage of the elective courses offered by the departments of Anatomy, Physiology, and Pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty six weeks.

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### CLASS STANDING AND EXAMINATIONS.

For the determination of class standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendations for internships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:—

*First Year.*—Microscopic anatomy, chemical physiology, elementary physiology.

*Second Year.*—Systematic human anatomy (including embryology), general physiology, morphological pathology, chemical pathology, and bacteriology.

*Third Year.*—Therapeutics, materia medica, obstetrics, and general surgery.

*Fourth Year.*—Internal medicine, clinical medicine, general surgery, clinical surgery, gynecology, operative obstetrics, and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for reëxamination at the beginning of the next academic year, or be required to repeat the course. The Faculty reserves the right to sever the connection of any student with the Medical Department at any time for what it deems either mental or moral unfitness for a career in medicine.

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#### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.
3. He must have done the required work and passed the stated examinations.
4. He must have paid in full the college fees.

## COURSES OF INSTRUCTION.

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### ANATOMY.

\*JOSEPH MARSHALL FLINT, M.D., Professor of Anatomy.

IRVING HARDESTY, Ph.D., Assistant Professor of Anatomy.

ROBERT ORTON MOODY, M.D., Assistant Professor of Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley, in East Hall. The classes are divided into small groups in order to avoid the inevitable noise and disturbance which results from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins at any desired pressure. After this process is completed the bodies are preserved in wood alcohol vapor or a carbolic solution.

The teaching museum consists of specially prepared corruptions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

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### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function

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\* Absent on leave, 1906-07.

and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student has a typical set of comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize himself with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with laboratory drawings and contain an epitome of the student's notes and collateral reading.

### 1. Histology.

Professor HARDESTY.

In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. The study is always comparative.

First year, 4 laboratory periods, 4 lectures a week, for 9 weeks.  
3½ units.

### 2. Microscopic Organology.

Professor HARDESTY.

The organs are discussed with reference to the form, arrangement, and number of the fundamental tissues composing them, with special reference to the structural and functional relations to other organs. In each case the student begins

first with the tissue in situ, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 4 laboratory periods, 4 lectures a week, for 9 weeks.  
3½ units.

### 3. Neurology.

Professor HARDESTY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with the view to tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

First year, 4 lectures, 4 laboratory periods a week, for 9 weeks. 3½ units.

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## SYSTEMATIC HUMAN ANATOMY.

The courses in systematic anatomy are given by practical work entirely. There are no lectures or quizzes. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

### 4. Osteology.

Professor MOODY.

Each student is loaned a skeleton and is required to model in clay and draw each bone in the body.

First year, 6 half-days a week, for 8 weeks. 4½ units.

### 5. Head and Neck.

Professor MOODY and Dr. LEE.

First year, 6 half-days a week, for 7 weeks. 4½ units.

**6. Arm and Thorax.** Professor MOODY and Dr. LEE.

First year, 6 half-days a week, for 7 weeks. 4½ units.

**7. Leg and Abdominal Viscera.** Professor MOODY and Dr. LEE.

First year, 6 half-days a week, for 7 weeks. 4½ units.

In his second year the student must repeat at least two of Courses 5, 6, and 7, provided he has already dissected the entire body in his first year. Research will be accepted in lieu of these courses.

**8. Special Anatomy for Physicians and Advanced Students.**

Professor MOODY.

This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis, and abdominal viscera. The work is largely independent. A limited number of regular students will be permitted to take this course as an elective after finishing the required work of the department.

Hours arranged to suit applicants. 4-8 units.

**9. Research.** Professors HARDESTY and MOODY.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. A certain number of units in Course 9 will be accepted in lieu of the required systematic anatomy of the second year from students who have shown marked ability in their work.

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**PHYSIOLOGY.**

JACQUES LOEB, M.D., Professor of Physiology.

FRANK W. BANCROFT, Ph.D., Assistant Professor of Physiology.

SAMUEL STEEN MAXWELL, Ph.D., Instructor in Physiology.

THEODORE C. BURNETT, M.D., Assistant in Physiology.

T. BRAILSFORD ROBERTSON, B.S., Assistant in Physiology.

The courses in Physiology are given during the first and second years.

*First Year.***1. Lectures in Physiology.**

Dr. MAXWELL.

The lectures will cover the main facts in the physiology of the blood and circulation, respiration, absorption, secretion, and muscle-nerve physiology.

4 lectures a week, for 9 weeks.

**2. Laboratory Work in Physiology.**

Dr. MAXWELL and Mr. ROBERTSON.

In connection with Course 1.

3 three-hour laboratory periods a week, for 9 weeks.

*Second Year.*

**3. Lectures in Physiology.**

Professor BANCROFT.

Physiology of the central and peripheral nervous systems and the senses.

4 lectures a week, for 9 weeks.

**4. Laboratory Work in Physiology.**

Professor BANCROFT and Dr. BURNETT.

In connection with Course 3.

3 three-hour laboratory periods a week, for 9 weeks.

**5. Chemical Physiology.**

Lectures on the chemical composition of the body, and on digestion, nutrition, and metabolism.

5 lectures a week, 9 weeks.

**6. Laboratory Course in Chemical Physiology.**

Laboratory work on the subjects covered in 5.

15 hrs. a week, 9 weeks.

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**PATHOLOGY.**

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

WILLIAM T. JANE, Technical Assistant.

Instruction in pathology is given in the Hearst Laboratory of Pathology in Berkeley during the second year, and at the City and County Hospital in San Francisco during the fourth year.

**1. Morphological Pathology.**

Professor TAYLOR.

The course includes instruction upon the chief organs and tissues in the order of their importance.

4 lectures, 12 hours' laboratory work a week, 18 weeks. 8 units.

Prerequisite: Completion of the course in first year histology and microscopic anatomy.



**2. Chemical Pathology.**

Professor TAYLOR.

In this course disease is studied from the point of view of disturbed functionation; this and the course previously detailed contrast pathological physiology with pathological anatomy.

5 lectures, 15 hrs. laboratory work per week, 9 weeks. 5 units.

Prerequisite: Completion of the first-year course in chemical physiology.

**3. Bacteriology.**

Professor WARD.

A course upon general microbiology and pathologic bacteriology.

5 lectures, 15 hrs. laboratory work a week, 9 weeks. 5 units.

Prerequisite: Completion of the first-year course in histology and microscopic anatomy.

**4. Autopsy Course.**

During the fourth year an autopsy course is conducted in the City and County Hospital. The members of the fourth-year class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students.

Two sections of 1 semester each, 4 hrs. a week, except in the event of absence of material. 1 unit.

**Research Department of Hearst Pathological Laboratory.**

The private laboratories of pathology are installed with equipments for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

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**THERAPEUTICS.**

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Therapeutics.

**1. Physiological Action of Drugs.**

Dr. SIMMONS.

The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.

Third year, 3 hrs. a week, 10 weeks. 3 units.

**2. Materia Medica and Pharmacy.**

**Dr. SIMMONS.**

The course is purely practical, embracing toxicology, the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

Third year, 2 hrs. a week, 27 weeks. 3 units.

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**MEDICINE.**

**WILLIAM WATT KERR, M.D.,** Professor of Clinical Medicine.

**HERBERT C. MOFFITT, M.D.,** Professor of the Principles and Practice of Medicine.

**CLARENCE QUINAN, M.D.,** Instructor in Medicine.

**GEORGE E. EBRIGHT, M.D.,** Instructor in Medicine.

**J. WILSON SHIELS, M.D.,** Instructor in Medicine.

**CHARLES M. COOPER, M.D.,** Instructor in Medicine.

**FRED G. BURROWS, M.D.,** Assistant in Medicine.

**CHESTER H. WOOLSEY, M.D.,** Assistant in Medicine.

**RACHEL L. ASH, B.S., M.D.,** Assistant in Medicine.

**MILTON B. LENNON, A.B., M.D.,** Assistant in Medicine.

Instruction in medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the methods of diagnosis, and in the rational employment of therapeutics. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and therefore properly requires a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the fourth year to place the students upon individual practical work.

**1. Physical Diagnosis.**

**Dr. EBRIGHT** and Hospital Internes.

This course is given in the wards of the City and County Hospital, and consists in a review of the topographical anatomy of the viscera, in systematic instruction in inspection, palpa-

tion, percussion, auscultation, and in the adjuncts to physical diagnosis. The class is divided into sections, insuring individual instruction.

Third year, 3 hrs. a week, 1 semester. 1 unit.

**2. Dispensary Clinics.**

Drs. ASH and LENNON.

The class is divided into sections and the students are brought into direct contact with the patients. The students are systematically instructed in the taking of histories, in the general and special examinations of the sick, and in treatment.

Third year, 4 hrs. a week, throughout the year. 2½ units.

**3. Clinics in Internal Medicine.**

Professor KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures and demonstrations upon the abundant material in the medical ward of the City and County Hospital. Students are assigned to the beds for the study of individual cases.

3 hrs. a week through 2 years. 6 units.

**4. Clinics on Medicine.**

Professor MOFFITT.

Clinical work at Out-Patient Department.

Third and fourth years, 2 hrs. a week through 2 years. 8 units.

**5. Bedside Instruction.**

Professor KERR,

Drs. EBRIGHT, BURROWS, and WOOLSEY.

The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies.

Fourth year, 2 hrs. a week through 1 semester. ½ unit.

**6. Dispensary Clinics.**

Dr. QUINAN.

The class is divided into sections which attend the ambulatory clinics, where they are instructed in the examinations of patients, and in systematic study of internal diseases.

Fourth year, 1 hr. a week. 1½ units.

**7. Lectures on Practical Therapeutics.**

Dr. SHIELDS.

Third and fourth years, 2 hrs. a week. 8 units.

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**SURGERY.**

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

J. HENRY BARBAT, M.D., Instructor in Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

WALLACE I. TERRY, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

RAYMOND RUSS, B.S., M.D., Instructor in Surgery.

ALFRED NEWMAN, M.D., Instructor in Surgery.

L. W. ALLEN, M.D., Instructor in Surgery.

TRACEY G. RUSSELL, M.D., Instructor in Surgery.

HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.

HARRY P. ROBARTS, M.D., Assistant in Surgery.

CAMILLUS BUSH, M.D., Assistant in Surgery.

JACOB SCHWARTZ, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years, and while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. Considerable clinical material is found in the wards of the City and County Hospital, and cases of minor surgery are treated in the Out-Patient Dispensary. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course. Operative

surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, at which papers are read and discussed under the guidance of the professor of surgery. A similar meeting is conducted for the third-year class by one of the assistants.

### 1. General Surgery.

Professor SHERMAN.

The principles of general surgery are discussed in the lectures illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

Third and fourth years, 2 hrs. a week through 2 years. 8 units.

### 2. Clinical Surgery.

Professor HUNTINGTON and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment, and asepsis are discussed at the bedside. Special attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anæsthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

Third and fourth years, 3 hrs. a week through the years. 6 units.

### 3. Surgical Pathology.

Drs. BRUNN and RYFKOGEL.

This course will present in a practical way the application of many of those points in the previous work of pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of microorgan-

isms by means of the lymphatics through the lungs, liver, and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked-eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious *granulomata* is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical.

Third year, 12 hrs. a week, 9 weeks. 2 units.

**1. Operative Surgery on the Cadaver.**

Dr. BARBAT.

The classical operations in the abdomen are performed by the students of the class individually, imitating as closely as possible the arrangement and technique of the operating room.

Fourth year, 2 hrs. a week, 9 weeks.  $\frac{1}{2}$  unit.

**5. Operative Surgery on the Cadaver.**

Dr. KUGELER.

This is an extension of Course 4, in which the surgery of the extremities is studied by practical operations on the cadaver under the same technical arrangements as in Course 4.

Fourth year, 2 hrs. a week, 9 weeks.  $\frac{1}{2}$  unit.

**6. Wound Dressing, Minor Surgery, and Bandaging.** Dr. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

Third year, 3 hrs. a week, one half-year. 1 unit.

**7. Ward Classes.**

Dr. L. W. ALLEN.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

Fourth year, 2 hrs. a week through 1 semester.  $\frac{3}{4}$  unit.

**8. Surgical Dispensary.**

Drs. RUSS, ROBERTS, BUSH, and SCHWARTZ.

This course is given upon the ambulatory material at the outpatient department, and presents in an advantageous manner

the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

Third year, 6 hrs. a week, 1 term.

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### MICROSCOPICAL AND CHEMICAL DIAGNOSIS.

PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.

HERBERT F. ALLEN, M.D., Assistant in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology, which are of assistance to the clinician in reaching a diagnosis. It aims to act as connecting link between the work of the preclinical and the clinical years.

#### 1. Microscopical and Chemical Diagnosis.

Drs. BROWN and ALLEN.

This course serves as an introduction to the students' work in practical medicine and surgery and is given almost exclusively by the laboratory method. A simple, effective, well equipped, well lighted laboratory accommodating one-half the class is situated on the grounds of the City and County Hospital, from the wards of which material for the course is obtained. During the year routine instruction is given on the normal and pathological conditions of the blood, with thorough training in the various methods of its examination, such as the examination of fresh specimens, hæmaglobin estimations, and the study of dried and stained preparations. The anamiæ following this and the condition of the blood in all diseases in which blood examinations tend to aid the clinician in his work are thoroughly considered. In every instance material for the class is obtained from cases in the wards. If these do not exist, specimens from the cabinet are used for purposes of instruction. Considerable time is devoted to a thorough study of the malarial blood, together with a life history of the parasites and the modes of transmission of the diseases. The examination of the urine in various diseases forms an important part of the course, and for this purpose the newer and more effective methods are

used. The examination of the sputum and feces in health and disease, together with a brief review of parasitology and the methods of diagnosis of parasitic diseases, are taken up with practical laboratory methods.

Through the courtesy of the officials at the Presidio, the secretions and excretions of patients suffering from tropical diseases can be obtained for the use of the class. Considerable emphasis will be laid on this feature of the work, since the acquisition of our new insular territories has greatly increased the trade between California and the Orient, and thus renders essential the protection of the State from the introduction of various tropical diseases. This demands the thorough training of students in work of this kind.

The course concludes with a thorough analysis of the gastric secretions and contents, exudates and transudates.

Third year, 12 hrs. a week, 9 weeks. 2 units.

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## OBSTETRICS.

ALFRED BAKER SPALDING, M.D., Assistant Professor of Obstetrics.

RAWLINS CADWALLADER, M.D., Assistant in Obstetrics.

The work of the Department of Obstetrics is given by lectures, quizzes, demonstrations, and clinics. During the first half of the third year the special anatomy and physiology of the female pelvis and its contents are reviewed. Normal pregnancy, labor, and the puerperium are described in detail. During the second half of the third year abnormal pregnancy, labor, and the puerperium are discussed, and the students are given individual bedside instruction in the diagnosis and care of pregnant, parturient, and puerperal women. Throughout the year quizzes and demonstrations upon the subjects of the lectures are given for one hour each week. Questions of treatment are discussed and illustrated by means of charts, manikins, and specimens. Attendance upon at least five women in confinement is required.

### 1. Lectures on Obstetrics.

Professor SPALDING.

Third year, lectures 2 hrs. a week throughout the year. 6 units.

Quiz and demonstration, 1 hr. a week.



**2. Practical Obstetrics.**

Professor SPALDING.

During the last half of the second year students are assigned in rotation for a two-weeks service at the San Francisco Maternity. This institution is situated in one of the poorest districts of the city and cares for a large number of pregnant women. The students live at the Maternity for two weeks, examine pregnant women, attend confinements, make daily post-partum visits, and care for both mother and baby. The student work is carefully supervised by the head of this department and his assistants at the dispensary. Personal instruction is given in abdominal palpation and auscultation and in pelvimetry. Careful and extensive histories and records of the patients are made and published annually.

Third year, 2 weeks for each student, second semester. 1 unit.

**3. Ward Classes.**

Professor SPALDING.

Senior students will be assigned work in the maternity wards under the control of the University. One clinic will be held before the class each week for ten weeks.

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**GYNECOLOGY.**

CHARLES A. VON HOFFMANN, M.D., Professor of Gynecology.

BEVERLY MACMONAGLE, M.D., Lecturer on Gynecology.

A. J. LARTIGAU, M.D., Assistant in Gynecology.

WILLIAM G. MOORE, M.D., Assistant in Gynecology.

Instruction in gynecology is given during the third and fourth years. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

**1. Clinics in Gynecology.**

Professor VON HOFFMANN and Dr. MOORE.

This course is given upon the material in the wards of the City and County Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room, those students are called who have worked on the patient. In this manner

the students are brought into close contact with the cases. In connection with this course, instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

Fourth year, 2 hrs. a week throughout the year. 2 units.

**2. Lectures in Gynecology.**

Dr. LARTIGAU.

A systematic course of lectures, combined with practical demonstrations illustrating the normal gross and microscopic anatomy, pathology, and symptomatology. Especial emphasis is laid upon pathological work in this course.

Third year, 1 hr. a week throughout the year. 2 units.

**3. Dispensary Clinics.** Professor VON HOFFMANN and Dr. MOORE.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

Fourth year, 18 hrs. for each section.  $\frac{1}{2}$  unit.

**MEDICAL JURISPRUDENCE.**

**Lectures on Medical Jurisprudence.**

Dr. D'ANCONA.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death, and the jurisprudence of insanity.

Third year, 1 hr. a week, second term.

**ELECTIVES.**

The elective clinical branches which are offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery, and orthopedic surgery.

Instruction in the general aspects of the diseases of children and of the nervous system is comprised in the work of the Department of Medicine. This general work is, in the elective subjects of pediatrics and clinical neurology, supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the Department of Surgery. This general work is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose, and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature. It is the intention of the Faculty in the near future to increase the electives in the clinical as well as in the preclinical years.

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## PEDIATRICS.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, M.D., Instructor in Pediatrics.

A. J. LARTIGAU, M.D., Assistant in Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences, and practical work in the Out-Patient Dispensary. The dispensary affords an extremely favorable field for the observation of the diseases peculiar to children.

### 1. Lectures and Recitations.

Professor LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

Fourth year, 1 hr. a week throughout the year. 2 units.

### 2. Dispensary Clinics.

Dr. BLUM and Dr. LARTIGAU.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

Fourth year, 2 hrs. a week throughout the year. 1½ units.

## DISEASES OF THE SKIN.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HOWARD MORROW, M.D., Instructor in Diseases of the Skin.

LIONEL S. SCHMITT, M.D., Assistant in Diseases of the Skin.

FLORENCE MCCOY HILL, M.D., Assistant in Diseases of the Skin.

GEORGE C. CULVER, M.D., Assistant in Diseases of the Skin.

**1. Diseases of the Skin.** Professor MONTGOMERY and Dr. MORROW.

The instruction in the department consists in:—

- (a) A review of the histology and microscopic anatomy of the skin.
- (b) The study of the pathology and bacteriology of the various cutaneous lesions. So far as possible the instruction in this aspect of the subject is carried parallel to the clinical study of individual cases. In the event of the absence of direct clinical material bearing upon any particular disease, this plan is supplemented by the demonstration and examination of museum specimens and collected tissues.
- (c) Practical work in the dermatological clinic. Instruction is founded upon the anatomy and pathology, as elucidated in the previous sections. The work is purely practical and individual; no didactic teaching is included.

Fourth year, 2 hrs. a week throughout the year. 2 units.

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CLINICAL NEUROLOGY.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

The course of instruction in diseases of the nervous system comprises lectures, clinics, demonstrations, and practical work.

**1. Clinic in Neurology.**

Professor NEWMARK.

The work in this course is entirely practical and covers the exhibition of selected dispensary cases and the training of students in the methods of conducting physical examinations on neurological cases and in testing the reactions of degeneration, sense, and perception. Patients suffering from various

diseases of the nervous system are shown, questions of diagnosis and prognosis considered, followed by a discussion of the pathological lesions shown by these patients. These discussions are illustrated by numerous pathological specimens prepared by the newer neurological methods.

Fourth year, 1 hr. a week throughout the year. 1 unit.

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#### DEPARTMENT OF OPHTHALMOLOGY.

GEORGE HERMAN POWERS, M.D., Professor of Ophthalmology.

CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.

ANNA M. FLYNN, Assistant in Ophthalmology.

Instruction in ophthalmology is given at the City and County Hospital and at the Out-Patient Dispensary. Operative cases are shown at the hospital, while valuable material for diagnosis and treatment is obtained from the ambulatory cases at the dispensary.

**1. Ophthalmology.** Professor POWERS, Drs. NAGEL and FLYNN.

In this course the pathology, diagnosis, and treatment of the diseases of the eye are covered by means of lectures and practical work.

Fourth year, 3 hrs. a week throughout the year; 1 lecture, 2 hrs. practical work a week. 3½ units.

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#### OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

ALBERT B. MCKEE, M.D., Instructor in Diseases of the Ear, Nose, and Throat.

WALTER F. FINNIE, M.D., Assistant in Diseases of the Ear, Nose, and Throat.

JAMES A. ELLIS, M.D., Assistant in Diseases of the Ear, Nose, and Throat.

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated at the clinic at the City and County Hospital.

**1. Otology, Rhinology, and Laryngology.**

Dr. McKEE and Assistants.

Clinic and dispensary course.

Fourth year, 3 hrs. a week throughout the year; 1 hr. clinic, 2 hrs. practical work one half-year. 1½ units.

DEPARTMENT OF GENITO-URINARY SURGERY.

JOHN MARSHALL WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

JOHN C. SPENCER, M.D., Assistant Professor of Genito-Urinary Surgery.

CECIL M. ARMISTEAD, M.D., Assistant in Genito-Urinary Surgery.

E. L. WEMPLE, Jr., M.D., Assistant in Genito-Urinary Surgery.

Instruction in genito-urinary surgery is given at the Out-Patient Dispensary. A large number of cases illustrating the various diseases of the genito-urinary tract pass under the observation of the class. Students are thoroughly drilled in the methods of diagnosis and the operative procedures required in the treatment of this class of patients.

**1. Genito-Urinary Surgery.**

Professor WILLIAMSON and Assistants.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases.

Four hrs. a week throughout the year; 1 clinic a week, 3 hrs. practical work. 3 units.

ORTHOPEDIC SURGERY.

— — —, Professor of Orthopedic Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

JAMES T. WATKINS, M.D., Assistant in Orthopedic Surgery.

**1. Orthopedic Surgery.**

Drs. HUNKIN and WATKINS.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces.

Fourth year, 3 hrs. a week throughout the year. 2 units.

## GRADUATES, 1906.

Alexander Adler, B.S. (Univ. of Cal.) .....	San Francisco
Olive Violet Brasier .....	Butte, Montana
Antonio Menotti dal Piaz .....	San Francisco
Sidney Ray Dannenbaum .....	San Francisco
Alex Vincent Doran .....	San Francisco
William Cooper Eidenmüller, B.S. (Univ. of Cal.) .....	Berkeley
John Henry Franklin .....	Gilroy
Samuel Percy Hardy .....	Oakland
Wilfred Bertram Hays .....	San Francisco
George Graham Hunter .....	Bakersfield
Louise Mary Igo .....	San Francisco
Charles Brekenfeld Jones .....	Sacramento
Herman Kronenberg .....	San Francisco
David Joseph Mahan .....	Eureka
Richard Leon Ochsner .....	Sacramento
Waid James Stone .....	San Francisco
Jackson Temple, Ph.G. (Univ. of Cal.) .....	Santa Rosa
Joseph Thomas Wrenn .....	Placerville
Reuben Sylvester Zumwalt .....	Yuba City

MATRICULATES, 1905-06.

FOURTH-YEAR CLASS.

Alexander Adler, B.S. (Univ. of Cal.) .....	San Francisco
Olive Violet Brasier .....	Butte, Montana
Antonio Menotti dal Piaz .....	San Francisco
Sidney Ray Dannenbaum .....	San Francisco
Alex Vincent Doran .....	San Francisco
Howard Palmer Dunbar .....	San Francisco
William Cooper Eidenmüller, B.S. (Univ. of Cal.) .....	Berkeley
John Henry Franklin .....	Gilroy
Samuel Percy Hardy .....	Oakland
Wilfred Bertram Hays .....	San Francisco
George Graham Hunter, B.S. ....	Bakersfield
Louise Mary Igo .....	San Francisco
Charles Breckenfeld Jones .....	Sacramento
Herman Kronenberg .....	San Francisco
David Joseph Mahan .....	Eureka
Richard Leon Ochsner .....	Sacramento
*Leo Lloyd Sexton .....	San Francisco
Gifford Lyne Sobey, A.B. (Stanford) .....	San Francisco
Waid James Stone .....	San Francisco
Jackson Temple, Ph.G. (Univ. of Cal.) .....	Santa Rosa
Joseph Thomas Wrenn .....	Placerville
Reuben Sylvester Zumwalt .....	Yuba City

THIRD-YEAR CLASS.

Frederick Madison Allen, A.B. (Univ. of Cal.) .....	Pomona
Archie Addison Alexander, A.B. (Univ. of Cal.) .....	Haywards
Elmer Wiley Bingaman .....	Soledad
Wilfred Everett Bixby .....	Oakland

\* Special student.



John Aloysius Clark, A.B. (St. Clara College)	Gilroy
Lloyd Alexander Craig	San Francisco
William Calhoun Dawson	Eldridge
Cornelius Thomas Devine, A.B. (St. Clara College)	Berkeley
Thomas Garfield Dodds	Kern City
Harry Emerson Foster	Oakland
Anna Maria Gutzwiller, B.S. (Univ. of Cal.)	St. Helena
Walter Orrin Howell	Hopland
James Harvey Johnston	Auckland, New Zealand
Alfred Dow Long	San Francisco
Earl Emmet Ostrom	Marysville
Romilda Paroni, B.S. (Univ. of Cal.)	Berkeley
Charles Arthur Pauson, B.S. (Univ. of Cal.)	San Francisco
Edward August Peterson, B.S. (Univ. of Cal.)	Auburn
Mehitabel Clara Proctor	Berkeley
Otto Theodor Schulze, B.L. (Univ. of Cal.)	Dixon
Middleton Pemberton Stansbury, B.S. (Univ. of Cal.)	Chico
Thomas Albion Stoddard, B.S. (Univ. of Cal.)	Santa Barbara
Florence Mabel Sylvester, B.L. (Univ. of Minn.)	Berkeley
Gavin James Telfer	San José
Allen Moore Walcott	Oakland

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SECOND-YEAR CLASS.

Lela June Beebe, A.B. (Stanford Univ.)	San Francisco
LeRoy Hewitt Briggs, Jr.	Oakland
Alexander Sterling Bunnell, B.S. (Univ. of Cal.)	Berkeley
Sanford Warren Cartwright, Ph.G., B.S. (Univ. of Cal.)	Berkeley
Ensang Ching	Honolulu, Hawaiian Islands
Herbert Jacob Cohn	Carson City, Nevada
Frank Edward Frates, B.S. (St. Mary's College)	Ione
Richard Warren Harvey, B.S. (Univ. of Cal.)	San Francisco
Louis Philippe Howe	San Francisco
Samuel Nicholas Jacobs, B.S. (Univ. of Cal.)	Oakland
Frederick Clinton Lewitt, B.S.	San Francisco

Thomas Drummond Mansfield, A.B. (Univ. of Cal.) .....	Haywards
Albert Manson Meads, B.S. ....	Oakland
Wallace Longfellow Meyers, Ph.G. (College of Physicians and Surgeons, San Francisco) .....	San Francisco
Jee Shin Fwe Pond Mooar .....	San Francisco
Alvin Powell .....	Oakland
Robert Thomas Sutherland, B.S. ....	Oakland

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 FIRST-YEAR CLASS.

Irving Steiger Cooper .....	Berkeley
Marian Osgood Hooker .....	Los Angeles
Harry Wilbur Irwin .....	Sacramento
William Crawford Mackintosh .....	San Francisco
Charles Leland MeVey .....	Oakland
Chester Biven Moore .....	San José
Howard Christian Naffziger .....	Nevada City, California
Eric Julius Rosenstirn .....	San Francisco
Margaret White .....	Berkeley



**UNIVERSITY OF CALIFORNIA**  
**MEDICAL DEPARTMENT**

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**ANNOUNCEMENT**  
**OF**  
**COURSES OF INSTRUCTION**  
**FOR THE ACADEMIC YEAR**  
**1907-1908**

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**BERKELEY**  
**THE UNIVERSITY PRESS**  
**1907**

Letters of inquiry concerning the Medical Department should be addressed to Dr. A. A. D'ANCONA, Dean, Medical Department, University of California, San Francisco, Cal.

## CALENDAR.

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### 1907.

August 5.—Undergraduate applications for admission and recommendations issued by the principals of accredited schools should be filed with the Recorder of the Faculties at Berkeley on or before August 5. This may be done by mail. Credentials from other universities and from secondary schools outside of California should be filed as early as possible.

August 8.—Academic year begins.

August 8-14.—Entrance examinations at Berkeley for the Academic and Medical Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before Wednesday, August 7. But applications for permits to be sent by mail should be made as far in advance of August 7 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

August 13, 14, 15, 10 a.m. to 12 m.—Registration of students of the third- and fourth-year classes; payment of fees. In the Dean's office in the main building of the Medical Department in San Francisco. Students of the second-year class register at Berkeley August 19. Instruction begins for second-year and first-year classes August 20.

August 15.—Class work begins for third- and fourth-year classes.

September 9.—Admission Day: a holiday.

November 28.—Thanksgiving Day: a holiday.

December 21.—Christmas vacation begins.

### 1908.

January 6.—Second half-year begins.

February 22.—Washington's Birthday: a holiday.

March 23.—Charter Day: a holiday.

April 29.—Examinations begin.

May 13.—Commencement Day.

## REGENTS OF THE UNIVERSITY.

### REGENTS EX OFFICIO.

HIS EXCELLENCY JAMES NORRIS GILLET	- - -	Sacramento
<i>Governor, President of the Regents ex officio.</i>		
HIS HONOR WARREN R. PORTER	- - -	Sacramento
<i>Lieutenant-Governor.</i>		
HON. ROBERT L. BEARDSLEE	- - -	Stockton
<i>Speaker of the Assembly.</i>		
HON. EDWARD HYATT	- - -	Sacramento
<i>State Superintendent of Public Instruction.</i>		
HON. BENJAMIN FRANKLIN RUSH,	- - -	Suisun
<i>President of the State Board of Agriculture.</i>		
LEWIS R. MEAD, Esq.,	328 Monadnock Building, San Francisco	
<i>President of the Mechanics' Institute.</i>		
BENJAMIN IDE WHEELER, Ph.D., LL.D.,	1820 Scenic Avenue, Berkeley	
<i>President of the University.</i>		

### APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

ISAIAS WILLIAM HELLMAN, Esq.,	- - -	†Term Expires.
Wells Fargo Nevada National Bank, San Francisco.		1918
CHESTER ROWELL, M.D.,	- - -	1910
Fresno.		
HON. JAMES ANDREW WAYMIRE,	- - -	1908
Alameda.		
HON. CHARLES WILLIAM SLACK, Ph.B., LL.B.,	- - -	1910
2224 Sacramento Street, San Francisco.		
JACOB BERT REINSTEIN, M.A.,	- - -	1912
906 Ellis Street, San Francisco.		

† Terms of Regents expire March 1.

JOHN ELIOT BUDD, A.B.,	- - - - -	1916
Stockton.		
MRS. PHOEBE APPERSON HEARST,	- - - - -	1914
Pleasanton.		
ARTHUR WILLIAM FOSTER, Esq.,	- - - - -	1916
Ferry Building, San Francisco.		
GARRET W. MCENERNEY, Esq.,	- - - - -	1920
1414 Post Street, San Francisco.		
CHARLES NORMAN ELLINWOOD, M.D.,	- - - - -	1908
2739 Pacific Avenue, San Francisco.		
GUY CHAFFEE EARL, A.B.,	- - - - -	1918
12 McClure Street, Oakland.		
REV. PETER CHRISTOPHER YORKE, S.T.D.,	- - - - -	1912
1267 Sixteenth Avenue, Oakland.		
JOHN ALEXANDER BRITTON, Esq.,	- - - - -	1914
1100 O'Farrell Street, San Francisco.		
FREDERICK WILLIAM DOHRMANN, Esq.,	- - - - -	1920
1090 Page Street, San Francisco.		
HON. JAMES WILFRED MCKINLEY, B.S.,	- - - - -	1923
254 South Broadway, Los Angeles.		
HON. THOMAS R. BARD	- - - - -	1923
Hueneme.		

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OFFICERS OF THE REGENTS.

HIS EXCELLENCY JAMES NORRIS GILLETT	- -	Sacramento
President.		
VICTOR HENDRICKS HENDERSON, B.L.,	- - - - -	
2345 Telegraph Avenue, Berkeley		
Acting Secretary and Land Agent.		
ISAIAH WILLIAM HELLMAN, Jr., Ph.B.,	- - - - -	
Union Trust Building, San Francisco		
Treasurer.		
CHARLES EDWARD SNOOK, Esq.,	- - - - -	906 Broadway, Oakland
Counsel.		



## FACULTY.

- BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University,  
*ex officio* President of the Faculty.
- ARNOLD A. D'ANCONA, A.B., M.D., Dean.
- ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and Opera-  
tive Surgery.
- GEORGE H. POWERS, A.M., M.D., Emeritus Professor of Ophthal-  
mology.
- JAMES M. KENNEDY, A.B., M.D., Honorary Professor of Surgery.
- HENRY H. RUTHERFORD, B.L., M.D., Honorary Professor of Medicine.
- WILLIAM WATT KERR, A.M., M.B., C.M., Professor of Clinical Medi-  
cine.
- DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.
- JOHN M. WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.
- HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and  
Practice of Surgery.
- ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.
- CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.
- HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and  
Practice of Medicine.
- JOSEPH MARSHALL FLINT, B.S., A.M., M.D., Professor of Anatomy.
- WILLIAM B. LEWITT, M.D., Professor of Pediatrics.
- JACQUES LOEB, M.D., Professor of Physiology.
- THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.
- LEO NEWMARK, M.D., Professor of Clinical Neurology.
- IRVING HARDESTY, A.B., Ph.D., Assistant Professor of Anatomy.
- ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.
- ALFRED B. SPALDING, A.B., M.D., Assistant Professor of Obstetrics.
- FRANK W. BANCROFT, A.M., M.S., Ph.D., Assistant Professor of  
Physiology.
- JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary  
Surgery.
- WALLACE I. TERRY, B.S., M.D., Assistant Professor of Surgery.
- SAMUEL STEEN MAXWELL, B.S., M.S., Ph.D., Assistant Professor of  
Physiology.
- HENRY B. A. KUGELER, M.D., Instructor in Surgery.
- SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.
- HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica and  
Therapeutics.

- HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.  
 HAROLD BRUNN, M.D., Instructor in Surgery.  
 CLARENCE QUINAN, M.D., Instructor in Medicine.  
 GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
 PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.  
 ALBERT B. MCKEE, Ph.B., M.D., Instructor in Diseases of the Ear,  
 Nose, and Throat.  
 SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.  
 RAYMOND RUSS, B.S., M.D., Instructor in Surgery.  
 ALFRED NEWMAN, A.B., M.D., Instructor in Surgery.  
 HOWARD MORROW, M.D., Instructor in Diseases of the Skin.  
 TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.  
 VARD H. HULEN, M.D., Instructor in Ophthalmology.  
 CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.  
 HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.  
 LEWIS W. ALLEN, A.B., M.D., Instructor in Surgery.  
 J. WILSON SHIELS, M.D., Instructor in Medicine.  
 CHAS. M. COOPER, M.R.C.S. Eng., Instructor in Medicine.  
 AUGUST J. LARTIGAU, M.D., Instructor in Gynecology and Pediatrics.  
 CAMILLUS BUSH, B.S., M.D., Instructor in Surgery.  
 T. BRAILSFORD ROBERTSON, B.S., Instructor in Physiology.  
 W. SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.  
 A. F. GILLIHAN, M.D., Instructor in Pathology.  
 RACHEL L. ASH, B.S., M.D., Instructor in Medicine.  
 WILLIAM G. MOORE, M.D., Assistant in Gynecology.  
 JAMES T. WATKINS, M.D., Assistant in Surgery.  
 ANNA M. FLYNN, M.D., Assistant in Ophthalmology.  
 THEODORE C. BURNETT, M.D., Assistant in Physiology.  
 HARRY P. ROBARTS, M.D., Assistant in Surgery.  
 JACOB SCHWARZ, M.D., Assistant in Surgery.  
 MILTON B. LENNON, A.B., M.D., Assistant in Medicine.  
 HAROLD P. HILL, A.B., M.D., Assistant in Medicine.  
 LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.  
 FLORENCE MCCOY HILL, B.S., M.D., Assistant in Diseases of the Skin.  
 WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.  
 PAUL E. BIBER, A.B., M.D., Assistant in Medicine.  
 PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.  
 GEORGE C. CULVER, M.D., Assistant in Diseases of the Skin.  
 OSCAR N. TAYLOR, M.D., Assistant in Diseases of the Ear, Nose, and  
 Throat.  
 JAMES A. ELLIS, M.D., Assistant in Diseases of the Ear, Nose, and  
 Throat.  
 ADELEBERT W. LEE, M.D., Assistant in Anatomy.

## REQUIREMENTS FOR ADMISSION.

Applicants for admission to the first year of the medical course and applicants for advanced standing must present evidence of having completed at least two full years of preliminary training in the undergraduate department of a college or university of recognized standing. Satisfactory evidence must also be presented that during these two years the applicant has completed courses of the following values:

**Chemistry.** (1) A course in general inorganic chemistry, including lectures, recitations, and experiments. Lectures and recitations 3 hrs. In this course should be included the main facts of physical chemistry.

(2) Laboratory course. Qualitative analysis, 6 hrs., throughout the year.

(3) Quantitative analysis. Gravimetric and volumetric. Laboratory 9 hrs. a week, one half-year.

(4) Organic chemistry. A course of lectures, demonstrations, and recitations in organic chemistry. 2 hrs. a week, one half-year.

(5) Organic chemistry. Laboratory course, 9 hrs. a week, one half-year.

Courses 1, 3, 5, and 8b and 10A in the Department of Chemistry in the University of California cover the work outlined above, which constitutes the minimum required amount of chemistry.

**Physics.** (1) A course in general physics, including lectures, recitations, and laboratory work. 6 hrs. a week, throughout one year.

(2) A laboratory course in physical measurements. 6 hrs. a week, throughout one year.

Courses 1 and 2A in the Department of Physics of the University of California cover the work outlined above, which constitutes the minimum required amount of physics.

**Zoology.** (1) A general course in zoology, giving a knowledge of the main facts of biology, covering structure, life history, and vital activities of selected types of animal life. The chief points of cytology and development, as well as a clear conception of the doctrine of descent, should also be given in this course. 2 hrs. a week, throughout one year.

(2) Laboratory work in zoology covering the points brought out in Course 1, with objectivity and the training of the powers of observation as its special features. Practice in the recording of scientific phenomena both by means of word description and drawings should also be given. 6 hrs. a week, throughout one year.

(3) A course in embryology. 8 hrs. a week, one half-year.

Courses 1, 2, and 3 in the Department of Zoology, or 1 and 2 in the Department of Zoology and the course in Embryology in the Department of Physiology, in the University of California cover, in general, the minimum work required in zoology.

**English.** A course in English composition consisting of consultation and theme work. At least 3 hrs. a week, throughout one year.

**French and German.** Applicants must possess a reading knowledge of scientific French and German.

The standard in the required courses outlined above must correspond and be at least equal to the standard of those given in the Academic Colleges of the University of California.

It is suggested that students should also during their preliminary academic training take certain elective courses which would materially increase the efficiency of their preparation for later work in medicine. Advanced mathematics, comparative anatomy, embryology, laboratory work in organic chemistry, and advanced work in physics covering the theory of solutions, are courses of this nature. Entering students, therefore, are urged to present them on admission with the required work. The adequate training of a physician requires a knowledge of physics, chemistry, biology, and the modern languages as outlined above; but as the need of a broad foundation in general culture can not be overestimated students should select from the curricula of their colleges as many courses as possible beyond those demanded and recommended by the Faculty of the Medical Department.

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### ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second-, third-, and fourth-year classes only upon examination covering the subjects in which they seek to be accredited. They must first present evidence that they have satisfied the regular matriculation requirements, and obtain from the Dean authorization for examination.

# JOINT COURSE IN NATURAL SCIENCE AND MEDICINE LEADING TO THE DEGREES OF B.S. AND M.D.

The requirements for admission to this course are those of the College of Natural Sciences, provided that chemistry and advanced mathematics be offered. Prospective students who contemplate taking this course are advised to present, likewise, additional credits in modern languages and mathematics. The following is an outline of the course in the College of Natural Sciences at Berkeley covering a period of two years:

	UNITS.
English, approximately .....	4
French, approximately .....	6
German, approximately .....	6
Mathematics, approximately .....	6
Physics, approximately .....	12
Chemistry, approximately .....	15
Zoology and Comparative Anatomy, approximately .....	15
Military Science and Physical Culture and Hygiene .....	9
<b>Total</b> .....	<b>73</b>

Owing to the annual changes in the courses offered by the various academic departments of the University, the exact distribution of these units is left to the discretion of the Joint Committee of the Academic and Medical Faculties in order to provide an elastic system capable of conforming to these changes.

Students intending to take the course should enter upon it at the beginning of the freshman year. They should also seek the advice of the chairman or some other member of the Joint Committee before making out their schedule of studies for the first half of the freshman year.

After the completion of their work in the Academic Department in Berkeley, students enter upon the work of the first two years of the College of Medicine (also in Berkeley) to complete the studies leading to the bachelor's degree. These consist of:

	UNITS.
Anatomy .....	38
Physiology .....	19
Pathology .....	18
<b>Total</b> .....	<b>75</b>

The work of these courses is described in detail in another part of this announcement.

Upon the completion of the course in the College of Natural Sciences above outlined, together with the first two years in the College of Medicine (consisting of Anatomy, Physiology, Pathology, Bacteriology), students will be granted the degree of Bachelor of Science on the recommendation of the Faculty of Natural Sciences.

After receiving the bachelor's degree, students enter upon the two years' study of the clinical branches of medicine in San Francisco, and upon satisfactory completion of these are granted the degree of Doctor of Medicine.

Special note should be taken by all students looking to the study of medicine in this University, that the preliminary course here described is in its essentials the only preparation that will admit to the clinical branches of medicine. Those, therefore, who are enrolled in the College of Letters or Social Sciences, or in any of the technical colleges, and who desire to study medicine, will need to supplement the usual courses in these colleges by such essentials of the course here outlined (French, German, Physics, Chemistry, and Zoology) as may not have been included in their original schedules.

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#### LOCATION.

The work of the first and second years of the medical course are conducted at Berkeley. The lecture rooms and laboratories of the departments of Physiology and Pathology are located in the Rudolph Spreckels Physiological Laboratory; those of the Department of Anatomy in the Anatomical Laboratory.

The main building of the Medical Department, located at the so-called "Affiliated Colleges" in the western part of San Francisco, at Second and Parnassus avenues, south of Golden Gate Park, is devoted to the work of the third and fourth years.

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#### - BOARDING.

The expense of living in Berkeley and San Francisco is not great. Good board with room rent may be procured at the rate of five dollars per week at a convenient distance from the College buildings.

## CLINICAL FACILITIES.

## THE UNIVERSITY OF CALIFORNIA HOSPITAL.

Through contributions made by charitable persons a hospital equipment has been installed in the main building of the Medical Department at Second and Parnassus avenues, San Francisco. The hospital was opened April 11, 1907, and has been in active operation since.

On the second floor is a well lighted operating room, with rooms annexed for anesthetizing, sterilizing, and X-ray apparatus. On this floor are two wards of fourteen beds each devoted to medicine, surgery, and gynecology. On the floor above are wards of five and ten beds respectively devoted to obstetrical cases. Adjoining these wards are separate rooms for the patients in the first and second stages of labor.

The hospital is designed not only for the care of the sick but also for instruction and research in medicine. It is under the complete control of the Board of Regents of the University.

## CITY AND COUNTY HOSPITAL OF SAN FRANCISCO.

The ward work and clinics held in the University Hospital are supplemented by similar courses given in the City and County Hospital, where there is an abundance of material for the work in medicine, surgery, and gynecology. The medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department. To the Faculty of the Medical Department have been assigned three and one-half wards.

## PRESIDIO MILITARY HOSPITAL.

Through the courtesy of the commanding officer of the medical department of the military post at the Presidio, students of the University will have access to the wards of this hospital, in which they will study medical and surgical cases under the direction of Major James M. Kennedy and Captain H. H. Rutherford of the medical service of the United States Army. During the session of

1907-08 the members of the fourth-year class will attend this hospital two afternoons a week.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

#### PRIVATE HOSPITALS.

During the session of 1906-07 clinics were held in three of the private hospitals of San Francisco. There is no reason to doubt that similar opportunities will be offered the students during 1907-08 through the kindness of the officials of these institutions.

#### OUT-PATIENT DEPARTMENT.

Instruction in ambulatory cases is given in the main building of the Medical Department.

#### THE SAN FRANCISCO MATERNITY.

Arrangements have been made with the Board of Directors of the San Francisco Maternity for instruction in practical obstetrics to members of the fourth-year class. Each student is detailed to live at the dispensary for a period of two weeks, during which time he makes examinations of pregnant women; attends, with an interne, patients in labor and makes daily post partum visits to the patient's home. Finally he examines women post partum for discharge, reporting on the condition of both mother and baby. During the past year two hundred and five patients were treated at the institution.

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#### HOSPITAL APPOINTMENTS.

The position of interne in the University of California Hospital is open each year to three members of the graduating class who recommend themselves to the Faculty by their general fitness for the appointment. Internes receive their board and lodging for one year and have opportunities for obtaining an invaluable experience in various fields of medicine and surgery. Internships in the City and County Hospital also are awarded six members of the graduating class upon the recommendation of the Faculty. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the Medical Department or by competitive examination.



## FEES.

*First Year.*

Matriculation .....	\$5.00
Tuition .....	150.00
Dissecting material .....	12.00

The fees are payable at the time of matriculation.

A key and breakage deposit of \$25 is required for the use of lockers and to cover cost of material used in the laboratories and damage to College buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5 a year is charged for the use of a microscope, and \$2 for an immersion lens. Each student must provide himself with a microscope.

A rental of \$2.50 is charged for the use of a set of bones and a deposit of \$7.50 as security for their return in good condition.

*Second Year.*

Tuition .....	\$150.00
Dissecting material .....	14.00
A key and breakage deposit of .....	25.00

*Third Year.*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

*Fourth Year.*

Tuition .....	\$150.00
Graduation .....	25.00
A key and breakage deposit of .....	10.00

## LIBRARY.

The library contains about 3,000 volumes, including many of the current text-books and some of the better monographs. Along certain lines the library is particularly strong. It is the policy of the department to make the collections uniform and to obtain complete files of the more important periodicals published in English, French, and German. Among the journals in the library are the following:

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anatomische

Hefte, *Annals of Surgery*, *Archiv für Anatomie und Entwicklungsgeschichte*, *Archiv für Entwicklungsmechanik der Organismen*, *Archiv für Klinische Chirurgie*, *Archiv für Pathologische Anatomie und Physiologie*, *Archives of Surgery*, *Arbeiten aus dem Kaiserlichen Gesundheitsamte*, *Berliner Klinische Wochenschrift*, *Boston Medical and Surgical Journal*, *British Medical Journal*, *Centralblatt für Bakteriologie und Parasitenkunde*, *Centralblatt für Chirurgie*, *Centralblatt für Gynecologie*, *Centralblatt für Klinische Medizin*, *Congrès Français de Chirurgie*, *Deutsche Medicinische Wochenschrift*, *Ergebnisse der Anatomie und Entwicklungsgeschichte*, *Fortschritte der Medizin*, *Jahrbücher der Gesamten Medizin*, *Jahresbericht der Gesamten Medizin*, *Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte*, *Jahresbericht über die Fortschritte der Anatomie und Physiologie*, *Jahresbericht über Pathogenen Mikroorganismen*, *Journal of the American Medical Association*, *Journal of Comparative Neurology*, *Journal of Experimental Medicine*, *Journal of Hygiene*, *Journal of Medical Research*, *London Lancet*, *Medical Record*, *Medical Review of Reviews*, *Morphologische Arbeiten*, *New York Medical Journal*, *Philadelphia Medical Journal*, *Revue de Chirurgie*, *Transactions of American Surgical Association*, *Verhandlungen der Deutschen Gesellschaft für Chirurgie*, *Wiener Medizinische Wochenschrift*, *Zeitschrift für Chirurgie*, *Zeitschrift für Morphologie und Anthropologie*.

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## ORGANIZATION OF INSTRUCTION.

Session of 1907-08.

**Summary of Courses.** Instruction is divided into three classes: didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory sessions, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value. This is likewise the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory

work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated. The advantages of concentration are many. The system offers more work to the student and is conducive to favorable conditions of study, in that students in the prolonged and consecutive periods apply themselves better and enter more deeply into the subject. It also grants to the students much more free time, time of the greatest value for purposes of private study or advanced work.

It is believed that the students on account of this free time will take advantage of the elective courses offered by the departments of Anatomy, Physiology, and Pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

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#### CLASS STANDING AND EXAMINATIONS.

For the determination of class standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendations for internships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

*First Year.*—Microscopic anatomy, chemical physiology, elementary physiology.

*Second Year.*—Systematic human anatomy (including embryology), general physiology, morphological pathology, chemical pathology, and bacteriology.

*Third Year.*—Therapeutics, materia medica, obstetrics, and general surgery.

*Fourth Year.*—Internal medicine, clinical medicine, general surgery, clinical surgery, gynecology, operative obstetrics, legal medicine, and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for reexamination at the beginning of the next academic year, or be required to repeat the course. The Faculty reserves the right to sever the connection of any student with the Medical Department at any time for what it deems either mental or moral unfitness for a career in medicine.

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#### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory

evidence of possessing a good moral character, which includes unexceptional conduct while in the department.

2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.

3. He must have done the required work and passed the stated examinations.

4. He must have paid in full the college fees.

## COURSES OF INSTRUCTION.

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### ANATOMY.

JOSEPH MARSHALL FLINT, B.S., A.M., M.D., Professor of Anatomy.

IRVING HARDESTY, A.B., Ph.D., Assistant Professor of Anatomy.

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

ADELEBERT WATTS LEE, M.D., Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins at any desired pressure. After this process is completed the bodies are preserved in wood alcohol vapor or a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

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### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function

and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize himself with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with the laboratory drawings and contain an epitome of the student's notes and collateral reading. The drawings are made from preparations of human material wherever this is possible.

### 1. **Histology.**

Professor HARDESTY.

In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. This study is always comparative.

First year, 4 laboratory periods, 4 lectures a week, for 9 weeks.  
3½ units.

### 2. **Microscopic Organology.**

Professor HARDESTY.

The organs are discussed with reference to their form, arrangement, and the number of the fundamental tissues composing

them, with special reference to their structural and functional relations to other organs. In each case the student begins their study with the structures in situ, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 4 laboratory periods, 4 lectures a week, for 9 weeks.  
3½ units.

### 3. Neurology.

Professor HARDESTY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with the view of tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

First year, 4 lectures, 4 laboratory periods a week, for 9 weeks.  
3½ units.

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## SYSTEMATIC HUMAN ANATOMY.

The courses in systematic anatomy are given by practical work entirely. There are no lectures and formal quizzes are given only at the completion of the dissection of a part assigned. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin-hardened sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

### 4. Osteology.

Professor MOODY.

Each student is loaned a skeleton and is required to model in clay each bone in the body.

First year, 2 half-days a week, for 16 weeks. 2½ units.



**5. Head and Neck.** Professor MOODY and Dr. LEE.

6 half-days a week, for 8 weeks.  $4\frac{1}{2}$  units.

**6. Arm and Thorax.** Professor MOODY and Dr. LEE.

6 half-days a week, for 8 weeks.  $4\frac{1}{2}$  units.

**7. Leg and Abdominal Viscera.** Professor MOODY and Dr. LEE.

6 half-days a week, for 8 weeks.  $4\frac{1}{2}$  units.

Two of the courses 5, 6, and 7 are required in each of the first two years. Research may be substituted for the required work of the second year by students who complete courses 5, 6, and 7 in the first year.

**8. Special Anatomy for Physicians and Advanced Students.**

Professors FLINT and MOODY.

This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis, and abdominal viscera. The work is largely independent. A limited number of regular students will be permitted to take this course as an elective after finishing the required work of the department.

Hours arranged to suit applicants. 4-8 units.

**9. Research.** Professors FLINT, HARDESTY, and MOODY.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. A certain number of units in Course 9 will be accepted in lieu of the required systematic anatomy of the second year from students who have shown marked ability in their work.

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**PHYSIOLOGY.**

JACQUES LOEB, M.D., Professor of Physiology.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

FRANK W. BANCROFT, Ph.D., Assistant Professor of Physiology.

SAMUEL STEEN MAXWELL, Ph.D., Assistant Professor of Physiology.

T. BRAILSFORD ROBERTSON, B.S., Instructor in Physiology.

THEODORE C. BURNETT, M.D., Assistant in Physiology.

The courses in Physiology are given during the first and second years.

*First Year.*

**2. General Physiology and Experimental Biology.**

Professor LOEB, Assistant Professor BANCROFT, and Dr. BURNETT.

General theory of life phenomena. Lectures and laboratory.

12 hrs., first half-year. Lectures Tu Th S, 11; laboratory Tu Th S, 8-11.

**3. Physiological Chemistry.**

Professor TAYLOR.

Physiology of digestion, metabolism, and animal heat. Lectures and laboratory.

12 hrs., first half-year. M W F, 1-5.

*Second Year.*

**4. Physiology of Blood, Circulation, Respiration, Muscle, Nerve, Secretion, and Reproduction.**

Dr. ROBERTSON.

12 hrs., first half-year. Lectures Tu Th S, 8; laboratory Tu Th S, 9-12.

**5. Physiology of the Nervous System and Special Senses.**

Assistant Professor MAXWELL.

12 hrs., first half-year. Lectures and laboratory M W F, 1-5.

**13. Seminar.**

Professor LOEB.

First half-year. M, 4-5. Open to students of Courses 2, 3, 4, and 5.

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**PATHOLOGY.**

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

A. F. GILLIHAN, M.D., Instructor in Pathology.

WILLIAM T. JANE, Technical Assistant.

Instruction in pathology is given in the Hearst Laboratory of Pathology in Berkeley during the second year, and at the University of California Hospital and the City and County Hospital in San Francisco during the fourth year.

**1. Morphological Pathology.**

Professor TAYLOR.

The course includes instruction upon the chief organs and tissues in the order of their importance.

4 lectures, 12 hrs. laboratory work a week, 18 weeks. 8 units.

Prerequisite: Completion of the course in first-year histology and microscopic anatomy.

**2. Chemical Pathology.**

Professor TAYLOR.

In this course disease is studied from the point of view of disturbed functionation; this and the course previously detailed contrast pathological physiology with pathological anatomy.

5 lectures, 15 hrs. laboratory work a week, 9 weeks. 5 units.

Prerequisite: Completion of the first-year course in chemical physiology.

**3. Bacteriology.**

Professor WARD.

A course upon general microbiology and pathologic bacteriology.

5 lectures, 15 hrs. laboratory work a week, 9 weeks. 5 units.

Prerequisite: Completion of the first-year course in histology and microscopic anatomy.

**4. Autopsy Course.**

Dr. LENNON.

During the fourth year an autopsy course is conducted in the City and County Hospital. The members of the fourth-year class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students.

Two sections of 1 semester each, 4 hrs. a week, except in the event of absence of material. 1 unit.

**Research Department of Hearst Pathological Laboratory.**

The private laboratories of pathology are installed with equipments for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

**MATERIA MEDICA.**

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica.

**1. Physiological Action of Drugs.**

Dr. SIMMONS.

The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.

Third year, 3 hrs. a week, 10 weeks.

**2. Materia Medica and Pharmacy.**

Dr. SIMMONS.

The course is purely practical, embracing toxicology, the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

Third year, 2 hrs. a week, 27 weeks.

**MEDICINE.**

WILLIAM WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and Practice of Medicine.

HENRY H. RUTHERFORD, B.L., M.D., Honorary Professor of Medicine.

CLARENCE QUINAN, M.D., Instructor in Medicine.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.

J. WILSON SHIELDS, M.D., Instructor in Medicine.

CHARLES M. COOPER, M.D., Instructor in Medicine.

RACHEL L. ASH, B.S., M.D., Instructor in Medicine.

MILTON B. LENNON, A.B., M.D., Assistant in Medicine.

WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.

PAUL E. BIBER, A.B., M.D., Assistant in Medicine.

PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.

HAROLD P. HILL, B.S., M.D., Assistant in Medicine.

Instruction in medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the methods of diagnosis, and in the rational employment of thera-

peusis. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and therefore properly requires a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the fourth year to place the students upon individual practical work.

**1. Physical Diagnosis.**

Dr. EBRIGHT and Hospital Internes.

This course is given in the wards of the City and County Hospital, and consists in a review of the topographical anatomy of the viscera, in systematic instruction in inspection, palpation, percussion, auscultation, and in the adjuncts to physical diagnosis. The class is divided into sections, insuring individual instruction.

**2. Clinics in Internal Medicine.**

Professor KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures, and demonstrations upon the abundant material in the medical ward of the City and County Hospital. Students are assigned to the beds for the study of individual cases.

3 hrs. a week, through 2 years.

**3. Clinics in Internal Medicine.**

Professor MOFFITT and Assistants.

Clinical work in the wards of the University of California Hospital and the Out-Patient Department.

Third and fourth years, 2 hrs. a week, through 2 years.

**4. Clinics in Internal Medicine.**

Professor RUTHERFORD.

This course is conducted at the U. S. A. General Hospital at the Presidio, and consists of individual work at the bedside and in the laboratory under the direction and supervision of Professor Rutherford.

Fourth year, 2 afternoons a week.

**5. Bedside Instruction.**

Professor KERR, Drs. EBRIGHT, CASTELHUN, BEERMAN, HILL, LENNON, and BIBER.

The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies.

Fourth year, 2 hrs. a week, through 1 semester.

**6. Lectures on Practical Therapeutics.**

Dr. SHIELDS.

Third and fourth years, 2 hrs. a week.

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**SURGERY.**

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

JAMES M. KENNEDY, A.B., M.D., Honorary Professor of Surgery.

WALLACE I. TERRY, M.D., Assistant Professor of Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

RAYMOND RUSS, B.S., M.D., Instructor in Surgery.

ALFRED NEWMAN, A.B., M.D., Instructor in Surgery.

LEWIS W. ALLEN, A.B., M.D., Instructor in Surgery.

TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.

HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.

CAMILLUS BUSH, B.S., M.D., Instructor in Surgery.

HARRY P. ROBERTS, M.D., Assistant in Surgery.

JACOB SCHWARZ, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years, and while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of

practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. The clinical material is found in the wards of the City and County Hospital, the University of California Hospital, and the U. S. A. General Hospital at the Presidio. Cases of minor surgery are treated in the Out-Patient Dispensary. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course. Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, at which papers are read and discussed under the guidance of the professor of the principles and practice of surgery. A similar meeting is conducted for the third-year class by one of the assistants.

### **1. General Surgery.**

Professor SHERMAN.

The principles of general surgery are discussed in the lectures illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

Third and fourth years, 2 hrs. a week, through 2 years.

### **2. Clinical Surgery.**

Professor HUNTINGTON and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment, and asepsis are discussed at the bedside. Special attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anæsthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

Third and fourth years, 3 hrs. a week, through the years.

**3. Clinical Surgery.**

Professor KENNEDY.

This course consists of clinics and ward class work in the operating room and the wards of the U. S. A. General Hospital at the Presidio.

Fourth year, 2 afternoons a week, throughout the year.

**4. Surgical Pathology.**

Drs. BRUNN and RYFKOGEL.

This course will present in a practical way the application of many of those points in the previous work of pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of microorganisms by means of the lymphatics through the lungs, liver, and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked-eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical.

Third year, 12 hrs. a week, 9 weeks.

**5. Operative Surgery on the Cadaver.**

Dr. BUSH.

The classical operations are performed by the students of the class individually, imitating as closely as possible the arrangement and technique of the operating room.

Fourth year, 2 hrs. a week, 9 weeks.

**6. Operative Surgery on the Cadaver.**

Dr. KUGELER.

This is an extension of Course 5, in which the surgery of the extremities is studied by practical operations on the cadaver under the same technical arrangement as in Course 4.

Fourth year, 2 hrs. a week, 9 weeks.



**7. Wound Dressing, Minor Surgery, and Bandaging.** Dr. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

Third year, 3 hrs. a week, one half-year.

**8. Ward Classes.**

Dr. L. W. ALLEN.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

Fourth year, 2 hrs. a week, through 1 semester.

**9. Surgical Dispensary.**

Drs. RUSS, BUSH, ROBARTS, and SCHWARTZ.

This course is given upon the ambulatory material at the outpatient department, and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

Third year, 6 hrs. a week, 1 term.

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**MICROSCOPICAL AND CHEMICAL DIAGNOSIS.**

HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology which are of assistance to the clinician in reaching a diagnosis. It aims to act as a connecting link between the work of the preclinical and the clinical years. The course is given almost exclusively by the laboratory method; short explanatory talks are given as the subject-matter demands. A simple, effective, well lighted laboratory is provided in the University Hospital, from the wards of which much of the material is derived. The wards of the City and County Hospital and of St. Luke's Hospital are also utilized for material. Routine instruction is given on the normal and patholog-

ical conditions of the blood; particular attention being paid to accuracy in counting and to the study of the different characteristic blood diseases. If material for use is not present in the wards, specimens from the cabinet are used. An effort is made to familiarize the students thoroughly with the recognition and life history of the malarial parasite.

The examination of the urine, normal and pathological, forms an important part of the course, particular attention being paid to the microscopical examination of the sediment.

The examination of the sputum and the analysis of the gastric content is adequately considered.

Considerable time is devoted to the examination of the feces in health and disease, particularly the recognition of parasites and their ova. Through the courtesy of the officials of the Army General Hospital at the Presidio, use may be made of the abundant tropical material in that institution.

**1. Microscopical and Chemical Diagnosis.**

Dr. ALLEN.

Third year, 4 hrs. a week, throughout the term.

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**OBSTETRICS.**

ALFRED BAKER SPALDING, A.B., M.D., Assistant Professor of Obstetrics.

The work of the Department of Obstetrics is given by lectures, quizzes, demonstrations, clinics, and bedside instruction in the ward of the University Hospital and at the homes of clinic patients.

Throughout the third year lectures are given on normal and abnormal pregnancy, labor, and the puerperium, which are illustrated by means of charts, manikins, and specimens. During the last half of the third year and the first half of the fourth year individual instruction is given in the delivery room, in the maternity ward, and in the nursery. During the last half of the fourth year the students are detailed in rotation to serve the regular two weeks' course at the San Francisco Maternity. The minimum requirement is that each student must attend and give personal care to at least five women during confinement.

**1. Lectures on Obstetrics.**

Professor SPALDING.

Third year, lectures and quizzes, 2 hrs. a week, throughout the year.

**2. Clinical Lecture.**

Professor SPALDING.

Third and fourth year, presentation of patients or demonstration of specimens and instruments, 1 hr. a week, throughout the year.

**3. Ward Work.**

Professor SPALDING.

Third and fourth year, practical work in the delivery room, maternity ward, and nursery in rotation to individual students.

**4. Dispensary Work.**

Professor SPALDING.

During the last half of the fourth year students are assigned in rotation for a two weeks' service at the San Francisco Maternity.

Fourth year, 2 hrs. a week, throughout the year.

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**GYNECOLOGY.**

CHARLES A. VON HOFFMANN, M.D., Professor of Gynecology.

A. J. LARTIGAU, M.D., Instructor in Gynecology.

WILLIAM G. MOORE, M.D., Assistant in Gynecology.

Instruction in gynecology is given during the third and fourth years. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

**1. Clinics in Gynecology.**

Professor VON HOFFMANN and Dr. MOORE.

This course is given upon the material in the wards of the City and County Hospital and the University of California Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room, those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course, instruction in operative gynecology

is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

Fourth year, 2 hrs. a week, throughout the year.

## 2. Lectures in Gynecology.

Dr. LARTIGAU.

A systematic course of lectures, combined with practical demonstrations illustrating the normal gross and microscopic anatomy, pathology, and symptomatology. Especial emphasis is laid upon pathological work in this course.

Third year, 1 hr. a week, throughout the year.

## 3. Dispensary Clinics.

Drs. MOORE and LARTIGAU.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

Fourth year, 18 hrs. for each section.

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## LEGAL MEDICINE.

### Lectures.

Dr. D'ANCONA.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death, and the jurisprudence of insanity.

Fourth year, 1 hr. a week, throughout the year.

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## ELECTIVES.

The elective clinical subjects offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery, and orthopedic surgery. Instruction in the general aspects of the diseases of children and of

the nervous system is comprised in the work of the department of medicine. In the elective subjects of pediatrics and clinical neurology, this general work is supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the department of surgery. This is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose, and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature.

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### **PEDIATRICS.**

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.

AUGUST J. LARTIGAU, M.D., Instructor in Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences, and practical work in the Out-Patient Dispensary.

#### **1. Lectures and Recitations.**

Professor LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

Fourth year, 1 hr. a week, throughout the year.

#### **2. Dispensary Clinics.**

Dr. BLUM and Dr. LARTIGAU.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

Fourth year, 2 hrs. a week, throughout the year.

# DISEASES OF THE SKIN.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HOWARD MORROW, M.D., Instructor in Diseases of the Skin.

LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.

GEORGE C. CULVER, M.D., Assistant in Diseases of the Skin.

FLORENCE MCCOY HILL, B.S., M.D., Assistant in Diseases of the Skin.

## 1. Diseases of the Skin. Professor MONTGOMERY and Dr. MORROW.

The instruction in the department consists in:

- (a) A review of the histology and microscopic anatomy of the skin.
- (b) The study of the pathology and bacteriology of the various cutaneous lesions. So far as possible the instruction in this aspect of the subject is carried parallel to the clinical study of individual cases. In the event of the absence of direct clinical material bearing upon any particular disease, this plan is supplemented by the demonstration and examination of museum specimens and collected tissues.
- (c) Practical work in the dermatological clinic. Instruction is founded upon the anatomy and pathology, as elucidated in the previous sections. The work is purely practical and individual; no didactic teaching is included.

Fourth year, 2 hrs. a week, throughout the year.

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# CLINICAL NEUROLOGY.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

The course of instruction in diseases of the nervous system comprises lectures, clinics, demonstrations, and practical work.

## 1. Clinic in Neurology.

Professor NEWMARK.

The work in this course is entirely practical and covers the exhibition of selected dispensary cases and the training of students in the methods of conducting physical examinations on neurological cases and in testing the reactions of degeneration, sense, and perception. Patients suffering from various diseases of the nervous system are shown, questions of diag-

nosis and prognosis considered, followed by a discussion of the pathological lesions shown by these patients. These discussions are illustrated by numerous pathological specimens prepared by the newer neurological methods.

Fourth year, 1 hr. a week, throughout the year.

Not offered during the session of 1906-07.

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### DEPARTMENT OF OPHTHALMOLOGY.

GEORGE HERMAN POWERS, M.D., Emeritus Professor of Ophthalmology.

VARD H. HULEN, M.D., Instructor in Ophthalmology.

CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.

W. SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.

ANNA M. FLYNN, M.D., Assistant in Ophthalmology.

Instruction in ophthalmology is given in the wards and operating rooms of the Hospital of the University of California and the City and County Hospital and at the Out-Patient Dispensary.

#### 1. Ophthalmology. Drs. HULEN, NAGEL, FRANKLIN, and FLYNN.

The subjects covered in this course comprise the methods of examining the patient and the external and ophthalmoscopic examinations of the eye; functional testing; diseases and injuries of the eye; and special study will be made of the eye in its relation to general diseases.

Fourth year, 4 hrs. a week, throughout the year.

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### OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

ALBERT B. MCKEE, Ph.B., M.D., Instructor of Diseases of the Ear, Nose, and Throat.

JAMES A. ELLIS, M.D., Assistant in Diseases of the Ear, Nose, and Throat.

OSCAR N. TAYLOR, M.D., Assistant in Diseases of the Ear, Nose, and Throat.

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital, the University of California Hos-

pital, and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated at the clinic at the City and County Hospital.

**1. Otology, Rhinology, and Laryngology.**

Dr. McKee and Assistants.

Instruction in diseases of the ear, nose, and throat is given in the wards of the City and County Hospital, the University of California Hospital, and the Out-Patient Dispensary.

Fourth year, 3 hrs. a week, throughout the year; 1 hr. clinic, 2 hrs. practical work, one half-year.

**DEPARTMENT OF GENITO-URINARY SURGERY.**

JOHN MARSHALL WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary Surgery.

**1. Genito-Urinary Surgery.**

Professors WILLIAMSON and SPENCER.

This course is entirely practical and is given in the University of California Hospital and at the Out-Patient Dispensary on ambulatory cases.

4 hrs. a week, throughout the year; 1 clinic a week, 3 hrs. practical work.

**ORTHOPEDIC SURGERY.**

— — —, Professor of Orthopedic Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

JAMES T. WATKINS, M.D., Assistant in Orthopedic Surgery.

**1. Orthopedic Surgery.**

Drs. HUNKIN and WATKINS.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces.

Fourth year, 2 hrs. a week, throughout the year.



## GRADUATES, 1907.

Frederick Madison Allen, A.B. (Univ. of Cal.).....	Pomona
Archie Addison Alexander, A.B. (Univ. of Cal.).....	Haywards
Elmer Wiley Bingaman .....	Soledad
Wilfred Everett Bixby .....	Oakland
John Aloysius Clark, A.B. (St. Clara College).....	Gilroy
Lloyd Alexander Craig .....	San Francisco
William Calhoun Dawson .....	Eldridge
Cornelius Thomas Devine, A.B. (St. Clara College).....	Berkeley
Thomas Garfield Dodds .....	Kern City
Harry Emerson Foster .....	Oakland
Anna Maria Gutzwiller, B.S. (Univ. of Cal.).....	St. Helena
Walter Orrin Howell .....	Hopland
James Harvey Johnston .....	Auckland, New Zealand
Earl Emmet Ostrom .....	Marysville
Romilda Paroni, B.S. (Univ. of Cal.).....	Berkeley
Charles Arthur Pauson, B.S. (Univ. of Cal.).....	San Francisco
Edward August Peterson, B.S. (Univ. of Cal.).....	Auburn
Mehitabel Clara Proctor .....	Berkeley
Otto Theodor Schulze, B.L. (Univ. of Cal.).....	Dixon
Gifford Lyne Sobey, A.B. (Stanford).....	San Francisco
Middleton Pemberton Stansbury, B.S. (Univ. of Cal.).....	Chico
Thomas Albion Stoddard, B.S. (Univ. of Cal.).....	Santa Barbara
Florence Mabel Sylvester, B.L. (Univ. of Minn.).....	Berkeley
Gavin James Telfer .....	San José
Allen Moore Walcott .....	Oakland

MATRICULATES, 1906-07.

FOURTH-YEAR CLASS.

Frederick Madison Allen, A.B. (Univ. of Cal)	Pomona
Archie Addison Alexander, A.B. (Univ. of Cal.)	Haywards
Elmer Wiley Bingaman	Soledad
Wilfred Everett Bixby	Oakland
John Aloysius Clark, A.B. (St. Clara College)	Gilroy
Lloyd Alexander Craig	San Francisco
William Calhoun Dawson	Eldridge
Cornelius Thomas Devine, A.B. (St. Clara College)	Berkeley
Thomas Garfield Dodds	Kern City
Harry Emerson Foster	Oakland
Anna Maria Gutzwiller, B.S. (Univ. of Cal.)	St. Helena
Walter Orrin Howell	Hopland
James Harvey Johnston	Auckland, New Zealand
Earl Emmet Ostrom	Marysville
Romilda Paroni, B.S. (Univ. of Cal.)	Berkeley
Charles Arthur Pauson, B.S. (Univ. of Cal.)	San Francisco
Edward August Peterson, B.S. (Univ. of Cal.)	Auburn
Mehitabel Clara Proctor	Berkeley
Otto Theodor Schulze, B.L. (Univ. of Cal.)	Dixon
Middleton Pemberton Stansbury, B.S. (Univ. of Cal.)	Chico
Thomas Albion Stoddard, B.S. (Univ. of Cal.)	Santa Barbara
Florence Mabel Sylvester, B.L. (Univ. of Minn.)	Berkeley
Gavin James Telfer	San José
Allen Moore Walcott	Oakland

THIRD-YEAR CLASS.

Lela June Beebe, A.B. (Stanford Univ.)	San Francisco
LeRoy Hewitt Briggs, Jr.	Oakland
Alexander Sterling Bunnell, B.S. (Univ. of Cal.)	Berkeley
Sanford Warren Cartwright, Ph.G., B.S. (Univ. of Cal.)	Berkeley

Herbert Jacob Cohn .....	Carson City, Nevada
Frank Edward Frates, B.S. (St. Mary's College) .....	Ione
Richard Warren Harvey, B.S. (Univ. of Cal.) .....	San Francisco
Louis Philippe Howe .....	San Francisco
Samuel Nicholas Jacobs, B.S. (Univ. of Cal.) .....	Oakland
Frederick Clinton Lewitt, B.S. (Univ. of Cal.) .....	San Francisco
Thomas Drummond Mansfield, A.B. (Univ. of Cal.) .....	Haywards
Albert Manson Meads, B.S. (Univ. of Cal.) .....	Oakland
Wallace Longfellow Meyers, Ph.G. (College of Physicians and Surgeons, San Francisco) .....	San Francisco
Jee Shin Fwe Pond Moar .....	San Francisco
Alvin Powell .....	Oakland
Robert Thomas Sutherland, B.S. ....	Oakland

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#### SECOND-YEAR CLASS.

Ensang Ching .....	San Francisco
Marian Osgood Hooker .....	Los Angeles
Harry Wilbur Irwin, B.S. ....	Berkeley
Charles Leland McVey, B.S. ....	Oakland
Chester Biven Moore, B.S. ....	San José
Howard Christian Naffziger, B.S. ....	Nevada City
Margaret White, A.B. ....	Berkeley

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#### FIRST-YEAR CLASS.

Walter Isaac Baldwin .....	Berkeley
Lloyd Bryan .....	Pepperwood
Kate Rawlinson Gompertz, B.S. ....	Berkeley
James Joseph Groom .....	San Francisco
Richard Warren Harvey, B.S. ....	San Francisco
Margaret Henderson, B.S. ....	Berkeley
Seely Frederick Long, Jr. ....	San Francisco
Douglas Howell Morse, B.S. ....	San Francisco
Rosalind Wulzen, B.S. ....	Oakland

UNIVERSITY OF CALIFORNIA  
MEDICAL DEPARTMENT

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ANNOUNCEMENT  
OF  
COURSES OF INSTRUCTION  
FOR THE ACADEMIC YEAR  
1908 - 1909

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BERKELEY  
THE UNIVERSITY PRESS  
1908



## CALENDAR

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### 1908.

August 3.—Undergraduate applications for admission to the academic departments and recommendations issued by the principals of accredited schools should be filed with the Recorder of the Faculties at Berkeley on or before August 3. This may be done by mail. Credentials from other universities and from secondary schools outside of California should be filed as early as possible.

August 6.—Academic year begins.

August 6-11.—Entrance examinations at Berkeley for the Academic and Medical Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before Wednesday, August 5. But applications for permits to be sent by mail should be made as far in advance of August 5 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

August 14, 15, 17, 9 a.m. to 12 m.—Office hours of the Dean at California Hall, Berkeley. Registration of first-year and second-year students in the Dean's office, Room 222, California Hall.

August 14, 15, 17, 2-4 p.m.—Registration of students of the third- and fourth-year classes in the Dean's office in the main building of the Medical Department in San Francisco.

August 17.—Class work begins.

September 9.—Admission Day: a holiday.

November 26-28.—Thanksgiving Recess.

December 20.—Christmas vacation begins.

### 1909.

January 4.—Second half-year begins.

February 22.—Washington's Birthday: a holiday.

March 23.—Charter Day: a holiday.

May 1.—Examinations begin.

May 12.—Commencement Day.

## REGENTS OF THE UNIVERSITY.

### REGENTS EX OFFICIO.

HIS EXCELLENCY JAMES NORRIS GILLETT .....	Sacramento
<i>Governor, President of the Regents ex officio.</i>	
HIS HONOR WARREN REYNOLDS PORTER .....	Sacramento
<i>Lieutenant-Governor.</i>	
HON. ROBERT LEWIS BEARDSLEE .....	Stockton
<i>Speaker of the Assembly.</i>	
HON. EDWARD HYATT .....	Sacramento
<i>State Superintendent of Public Instruction.</i>	
HON. BENJAMIN FRANKLIN RUSH .....	Suisun
<i>President of the State Board of Agriculture.</i>	
RUDOLPH JULIUS TAUSSIG, Esq. ....	3134 Sixteenth street, San Francisco
<i>President of the Mechanics' Institute.</i>	
BENJAMIN IDE WHEELER, Ph.D., LL.D. ....	1820 Scenic avenue, Berkeley
<i>President of the University.</i>	

### APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

ISMAEL WILLIAM HELLMAN, Esq. ....	<sup>*Term</sup> Expires. 1918
Wells-Fargo Nevada National Bank, San Francisco.	
CHESTER ROWELL, M.D. ....	1910
Fresno.	
HON. CHARLES WILLIAM SLACK, Ph.B., LL.B. ....	1910
504 Kohl Building, San Francisco.	
JACOB BERT REINSTEIN, M.A. ....	1912
906 Ellis street, San Francisco.	

\* The term of the appointed Regents is sixteen years, and expires March 1.

JOHN ELIOT BUDD, A.B. ....	1916
Stockton.	
MRS. PHOEBE APPERSON HEARST .....	1914
Pleasanton.	
ARTHUR WILLIAM FOSTER, Esq. ....	1916
1210 James Flood Building, San Francisco.	
GARRET WILLIAM MCENERNEY, Esq. ....	1920
James Flood Building, San Francisco.	
GUY CHAFFEE EARL, A.B. ....	1918
607 Crocker Building, San Francisco.	
HON. JAMES WILFRED MCKINLEY, B.S. ....	1923
Pacific Electric Building, Los Angeles.	
REV. PETER CHRISTOPHER YORKE, S.T.D. ....	1912
1267 Sixteenth avenue, Oakland.	
JOHN ALEXANDER BRITTON, Esq. ....	1914
925 Franklin street, San Francisco.	
FREDERICK WILLIAM DOHRMANN, Esq. ....	1920
1550 Van Ness avenue, San Francisco.	
HON. THOMAS R. BARD .....	1922
Hueneme.	
FRANK SPAULDING JOHNSON .....	1924
215 Sansome street, San Francisco.	
WILLIAM HENRY CROCKER .....	1924
Crocker National Bank, San Francisco.	

OFFICERS OF THE REGENTS.

HIS EXCELLENCY JAMES NORRIS GILLETT .....	Sacramento
President.	
VICTOR HENDRICKS HENDERSON, B.L.,	
2345 Telegraph avenue, Berkeley	
Acting Secretary and Land Agent.	
ISAIAS WILLIAM HELLMAN, Jr., Ph.B.,	
Union Trust Building, San Francisco	
Treasurer.	
FLETCHER A. CUTLER .....	506 Crocker Building, San Francisco
Counsel.	



## FACULTY.

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BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University,  
*ex officio* President of the Faculty.

ARNOLD A. D'ANCONA, A.B., M.D., Dean.

ROBERT A. McLEAN, M.D., Emeritus Professor of Clinical and Oper-  
ative Surgery.

GEORGE H. POWERS, A.M., M.D., Emeritus Professor of Ophthal-  
mology.

JAMES M. KENNEDY, A.B., M.D., Honorary Professor of Surgery.

WILLIAM WATT KERR, A.M., M.B., C.M., Professor of Clinical Med-  
icine.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

JOHN M. WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and  
Practice of Surgery.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and  
Practice of Medicine.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

JACQUES LOEB, M.D., Professor of Physiology.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

IRVING HARDESTY, A.B., Ph.D., Associate Professor of Anatomy.

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

ALFRED B. SPALDING, A.B., M.D., Assistant Professor of Obstetrics.

FRANK W. BANCROFT, A.M., M.S., Ph.D., Assistant Professor of  
Physiology.

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary  
Surgery.

WALLACE I. TERRY, B.S., M.D., Assistant Professor of Surgery.

SAMUEL STEEN MAXWELL, B.S., M.S., Ph.D., Assistant Professor of  
Physiology.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica and  
Therapeutics.

HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.  
 CLARENCE QUINAN, M.D., Instructor in Medicine.  
 GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
 PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.  
 ALBERT B. MCKEE, Ph.B., M.D., Instructor in Diseases of the Ear,  
 Nose, and Throat.  
 SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.  
 RAYMOND RUSS, B.S., M.D., Instructor in Surgery.  
 ALFRED NEWMAN, A.B., M.D., Instructor in Surgery.  
 HOWARD MORROW, M.D., Instructor in Diseases of the Skin.  
 TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.  
 VARD H. HULEN, M.D., Instructor in Ophthalmology.  
 CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.  
 HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.  
 LEWIS W. ALLEN, A.B., M.D., Instructor in Surgery.  
 J. WILSON SHIELDS, M.D., Instructor in Medicine.  
 CHAS. M. COOPER, M.R.C.S. Eng., Instructor in Medicine.  
 AUGUST J. LARTIGAU, M.D., Instructor in Gynecology and Pediatrics.  
 CAMILLUS BUSH, B.S., M.D., Instructor in Surgery.  
 T. BRAILSFORD ROBERTSON, B.S., Instructor in Physiology.  
 A. F. GILLIHAN, M.D., Instructor in Pathology.  
 RACHEL L. ASH, B.S., M.D., Instructor in Medicine.  
 WILLIAM G. MOORE, M.D., Assistant in Gynecology.  
 JAMES T. WATKINS, M.D., Assistant in Surgery.  
 THEODORE C. BURNETT, M.D., Assistant in Physiology.  
 HARRY P. ROBERTS, M.D., Assistant in Surgery.  
 JACOB SCHWARTZ, M.D., Assistant in Surgery.  
 MILTON B. LENNON, A.B., M.D., Assistant in Medicine.  
 HAROLD P. HILL, A.B., M.D., Assistant in Medicine.  
 LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.  
 HARRY E. ALDERSON, M.D., Assistant in Diseases of the Skin.  
 FLORENCE MCCOY HILL, B.S., M.D., Assistant in Diseases of the Skin.  
 WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.  
 PAUL E. BIBER, A.B., M.D., Assistant in Medicine.  
 PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.  
 GEORGE D. CULVER, M.D., Assistant in Diseases of the Skin.  
 EDGAR W. ALEXANDER, B.S., M.D., Assistant in Ophthalmology.

## REQUIREMENTS FOR ADMISSION.

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Applicants for admission to the first year of the medical course and applicants for advanced standing must have completed at least two full years of preliminary training in the undergraduate department of the University of California or of a university of equal standing. They must present evidence that during their academic course they pursued the study of chemistry, physics and zoology, each for at least one year with laboratory work. They must have a reading knowledge of French and German.

It is suggested that students should also during their preliminary academic training take certain courses which would materially increase the efficiency of their preparation for later work in medicine. Advanced mathematics, comparative anatomy, embryology, laboratory work in organic chemistry, and advanced work in physics covering the theory of solutions, are courses of this nature. Entering students, therefore, are urged to present them on admission with the required work. The adequate training of a physician requires a knowledge of physics, chemistry, biology and the modern languages; but as the need of a broad foundation in general culture can not be overestimated students should select from the curricula of their colleges as many courses as possible beyond those demanded and recommended by the Faculty of the Medical Department.

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## ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second-, third-, and fourth-year classes only upon examination covering the subjects in which they seek to be accredited. They must first present evidence that they have satisfied the regular matriculation requirements, and obtain from the Dean authorization for examination.

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## LOCATION.

The work of the first and second years of the medical course are conducted at Berkeley. The lecture rooms and laboratories of the departments of Physiology and Pathology are located in the Rudolph Spreckels Physiological Laboratory; those of the Department of Anatomy in the Anatomical Laboratory.

The main building of the Medical Department, located at the so-called "Affiliated Colleges" in the western part of San Francisco, at Second and Parnassus avenues, south of Golden Gate Park, is devoted to the work of the third and fourth years.

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### BOARDING.

The expense of living in Berkeley and San Francisco is not great. Good board with room rent may be procured at the rate of five dollars per week at a convenient distance from the College buildings.

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### CLINICAL FACILITIES.

#### THE UNIVERSITY OF CALIFORNIA HOSPITAL.

Through contributions made by charitable persons a hospital equipment has been installed in the main building of the Medical Department at Second and Parnassus avenues, San Francisco. The hospital was opened April 11, 1907, and has been in active operation since.

On the second floor is a well-lighted operating room, with rooms annexed for anesthetizing, sterilizing, and X-ray apparatus. On this floor are two wards of sixteen beds each and one of twenty-eight beds devoted to medicine, surgery, and gynecology. On the floor above are wards of five and ten beds respectively devoted to obstetrical cases. Adjoining these wards are separate rooms for patients in the first and second stages of labor.

The hospital is designed not only for the care of the sick but also for instruction and research in medicine. It is under the complete control of the Board of Regents of the University.

#### CITY AND COUNTY HOSPITAL OF SAN FRANCISCO.

The ward work and clinics held in the University Hospital are supplemented by similar courses given in the City and County Hospital. The medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department.

#### PRESIDIO MILITARY HOSPITAL.

Through the courtesy of the commanding officer of the medical department of the military post at the Presidio, students of the

University have access to the wards of this hospital, in which they study medical and surgical cases under the direction of Major James M. Kennedy and Major E. R. Schreiner of the medical service of the United States Army. During the session of 1908-09 the members of the fourth-year class will attend this hospital at least two afternoons a week.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

#### PRIVATE HOSPITALS.

During the session of 1907-08 clinics were held in three of the private hospitals of San Francisco. There is no reason to doubt that similar opportunities will be offered the students during 1908-09 through the kindness of the officials of these institutions.

#### OUT-PATIENT DEPARTMENT.

Instruction in ambulatory cases is given in the main building of the Medical Department.

#### THE SAN FRANCISCO MATERNITY.

Arrangements have been made with the Board of Directors of the San Francisco Maternity for instruction in practical obstetrics to members of the fourth-year class. Each student is detailed to live at the dispensary for a period of two weeks, during which time he makes examinations of pregnant women; attends, with an interne, patients in labor and makes daily post-partum visits to the patient's home. Finally he examines women post-partum for discharge, reporting on the condition of both mother and baby. During the past year two hundred and sixteen patients were treated at the institution.

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#### HOSPITAL APPOINTMENTS.

The position of interne in the University of California Hospital is open each year to six members of the graduating class who recommend themselves to the Faculty by their general fitness for the appointment. Internes receive their board and lodging for one year and have opportunities for obtaining an invaluable experience in various fields of medicine and surgery. Internships in the City

and County Hospital also are awarded six members of the graduating class upon the recommendation of the Faculty. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the Medical Department or by competitive examination.

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### FEES.

#### *First Year.*

Matriculation .....	\$5.00
Tuition .....	150.00
Dissecting material .....	10.00

The fees are payable at the time of matriculation. Students may pay one-half of the tuition fee at the beginning of each term.

A key and breakage deposit of \$25 is required for the use of lockers and to cover the cost of material used in the laboratories and damage to College buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5 a year is charged for the use of a microscope, and \$2 for an immersion lens. Each student must provide himself with a microscope.

A rental of \$2.50 is charged for the use of a set of bones and a deposit of \$7.50 as security for their return in good condition.

#### *Second Year.*

Tuition .....	\$150.00
Dissecting material .....	10.00
A key and breakage deposit of .....	25.00

#### *Third Year.*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

#### *Fourth Year.*

Tuition .....	\$150.00
Graduation .....	25.00
A key and breakage deposit of .....	10.00

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### LIBRARY.

The library contains about 3,000 volumes, including many of the current text-books and some of the better monographs. Along certain lines the library is particularly good. It is the policy of the department to make the collections uniform and to obtain com-

plete files of the more important periodicals published in English, French and German. Among the journals in the library are the following:

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anatomische Hefte, Annals of Surgery, Archiv für Anatomie und Entwicklungsgeschichte, Archiv für Entwicklungsmechanik der Organismen, Archiv für Klinische Chirurgie, Archiv für Pathologische Anatomie und Physiologie, Archives of Surgery, Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berliner Klinische Wochenschrift, Boston Medical and Surgical Journal, British Medical Journal, Centralblatt für Bakteriologie und Parasitenkunde, Centralblatt für Chirurgie, Centralblatt für Gynecologie, Centralblatt für Klinische Medizin, Congrès Français de Chirurgie, Deutsche Medizinische Wochenschrift, Ergebnisse der Anatomie und Entwicklungsgeschichte, Fortschritte der Medizin, Jahrbücher der Gesamten Medizin, Jahresbericht der Gesamten Medizin, Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte, Jahresbericht über die Fortschritte der Anatomie und Physiologie, Jahresbericht über Pathogenen Mikroorganismen, Journal of the American Medical Association, Journal of Comparative Neurology, Journal of Experimental Medicine, Journal of Hygiene, Journal of Medical Research, London Lancet, Medical Record, Medical Review of Reviews, Morphologische Arbeiten, New York Medical Journal, Philadelphia Medical Journal, Revue de Chirurgie, Transactions of American Surgical Association, Verhandlungen der Deutschen Gesellschaft für Chirurgie, Wiener Medizinische Wochenschrift, Zeitschrift für Chirurgie, Zeitschrift für Morphologie und Anthropologie.

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## ORGANIZATION OF INSTRUCTION.

SESSION OF 1908-09.

**Summary of Courses.** Instruction is divided into three classes: didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory sessions, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value.

This is likewise the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated. The advantages of concentration are many. The system offers more work to the student and is conducive to favorable conditions of study, in that students in the prolonged and consecutive periods apply themselves better and enter more deeply into the subject. It also grants to the students much more free time, time of the greatest value for purposes of private study or advanced work.

It is believed that the students on account of this free time will take advantage of the elective courses offered by the departments of Anatomy, Physiology, and Pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

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#### CLASS STANDING AND EXAMINATION.

For the determination of class standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendations for internships.



Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

*First Year.*—Microscopic anatomy, chemical physiology, elementary physiology.

*Second Year.*—Systematic human anatomy, neurology, general physiology, morphological pathology, chemical pathology, and bacteriology.

*Third Year.*—Therapeutics, materia medica, obstetrics, and general surgery.

*Fourth Year.*—Internal medicine, clinical medicine, general surgery, clinical surgery, gynecology, operative obstetrics, legal medicine, and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of the departments is reserved the right to determine whether a student who has failed in a course

shall be entitled to appear for reëxamination at the beginning of the next academic year, or be required to repeat the course. The Faculty reserves the right to sever the connection of any student with the Medical Department at any time for what it deems either mental or moral unfitness for a career in medicine.

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#### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.

2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.

3. He must have done the required work and passed the stated examinations.

4. He must have paid in full the college fees.

## COURSES OF INSTRUCTION.

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### ANATOMY.

IRVING HARDESTY, A.B., Ph.D., Associate Professor of Anatomy.

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins at any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

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### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of

the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize himself with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with the laboratory drawings and contain an epitome of the student's notes and collateral reading. The drawings are made from preparations of human material wherever this is possible.

### 1. **Histology.**

Professor HARDESTY.

In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. This study is always comparative.

First year, 2 laboratory periods, 2 lectures a week, first term. 4 units.

### 2. **Microscopic Organology.**

Professor HARDESTY.

The organs are discussed with reference to their form, arrangement, and the number of the fundamental tissues composing them, with special reference to their structural and functional relations to other organs. In each case the student

begins their study with the structures *in situ*, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 2 laboratory periods, 2 lectures a week, second term.  
4 units.

### 3. **Neurology.**

Professor HARDESTY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course I is used as the unit in the construction of the nervous system with the view of tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

Second year, 2 lectures, 2 laboratory periods a week, first term. 4 units.

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## SYSTEMATIC HUMAN ANATOMY.

The courses in systematic anatomy are given by practical work entirely. There are no lectures and formal quizzes are given only at the completion of the dissection of a part assigned. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin-hardened sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

### 4. **Osteology.**

Professor MOODY.

Each student is loaned a skeleton and is required to model in clay each bone in the body.

First year, 2 half-days a week, first term. 2½ units.

5. **Head and Neck.** Professor MOODY.  
5 half-days a week, for 8 weeks.
6. **Arm and Thorax.** Professor MOODY.  
5 half-days a week, for 8 weeks.
7. **Leg and Abdominal Viscera.** Professor MOODY.  
5 half-days a week, for 8 weeks.
8. **Topographical and Applied Anatomy.** Professor MOODY.  
The entire body, sections of the body, models, and special dissections will be used in this course with the intent to enable the student to become more familiar with structural interrelations and to assemble information obtained in preceding dissections.  
Prerequisite: dissection of the entire body.  
5 half-days a week for eight weeks. 2½ units.
9. **Special Anatomy for Physicians and Advanced Students.** Professor MOODY.  
This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis, and abdominal viscera. The work is largely independent. A limited number of regular students will be permitted to take this course as an elective after finishing the required work of the department.  
Hours arranged to suit applicants. 4-8 units.
10. **Research.** Professors HARDESTY and MOODY.  
Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. The course also gives opportunity for those wishing to gain experience in special Histological Technique and in the construction of papers for publication. A certain number of units in Course 9 will be accepted in lieu of the required systematic anatomy of the second year from students who have shown marked ability in their work. If the results obtained merit it, they will be published. To cover the cost of material expensive to obtain, chemicals, etc., a laboratory fee of \$5 will be charged. Hours optional.

**11. Histological Technique.**

Mr. MILLER.

This course is designed for those wishing to further familiarize themselves with the general and special methods of obtaining, fixing, embedding, sectioning, staining, and mounting material for microscopical examination. The course is optional. It cannot be substituted for work required in the College of Medicine. Hours to be arranged. Laboratory fee to cover cost of reagents and material, \$10.

**PHYSIOLOGY.**

JACQUES LOEB, M.D., Professor of Physiology.

\*ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

\*FRANK W. BANCROFT, Ph.D., Assistant Professor of Physiology.

SAMUEL STEEN MAXWELL, Ph.D., Assistant Professor of Physiology.

T. BRAILSFORD ROBERTSON, B.S., Instructor in Physiology.

THEODORE C. BURNETT, M.D., Assistant in Physiology.

E. WERBER, Ph.D., Assistant in Physiology.

ROSALIND WULZEN, B.S., Assistant in Physiology.

The courses in Physiology are given during the first and second years.

*First Year.***2. Experimental Biology and General Physiology.**

Professor LOEB and Dr. WERBER.

Dynamics and General Theory of Life Phenomena.

Lectures 2 hrs., laboratory 6 hrs. M W, 1-5. First half-year.

**3. Physiological Chemistry.**

Dr. QUINAN.

Physiology of Digestion, Metabolism, and Animal Heat.

Lectures 3 hrs., laboratory 9 hrs. M W F, 8-12. First half-year.

**4. Physiology of the Blood, Circulation, Respiration, Muscle, Nerve, Secretion, and Reproduction.**

Assistant Professor MAXWELL.

Lectures 3 hrs., laboratory 9 hrs. Tu Th, 1-5; S, 8-12. First half-year.

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\* Absent on leave, 1908-09.

*Second Year.*

**4. Physiology of the Blood, Circulation, Respiration, Muscle, Nerve, Secretion, and Reproduction.\***

Assistant Professor MAXWELL.

Lectures 3 hrs., laboratory 9 hrs. Tu Th, 1-5; S, 8-12. First half-year.

**5. Physiology of the Nervous System and Special Senses.**

Assistant Professor MAXWELL.

Lectures 3 hrs., laboratory 9 hrs. M W F, 1-5. Second half-year.

**6. Pharmacology.**

Assistant Professor ROBERTSON.

Lectures 2 hrs., laboratory 6 hrs. Tu Th, 1-5. Second half-year.

**13. Seminar.**

First half-year. M, 1-5. Open to students of Courses 2, 3, 4, 5, and 6.

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**PATHOLOGY.**

\*ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

A. F. GILLIHAN, M.D., Instructor in Pathology.

WILLIAM T. JANE, Technical Assistant.

Instruction in pathology is given in the Hearst Laboratory of Pathology in Berkeley during the second year, and at the University of California Hospital and the City and County Hospital in San Francisco during the fourth year.

**1. Morphological Pathology.**

Dr. QUINAN.

The course includes instruction upon the chief organs and tissues in the order of their importance.

4 lectures, 12 hrs. laboratory work a week, 18 weeks.

Prerequisite: Completion of the course in first-year histology and microscopic anatomy.

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\* For 1908-09 this course will be given in the second as well as in the first year. Thereafter it will be given only in the first year.

\* Absent on leave, 1908-09.



**2. Chemical Pathology.**

Dr. QUINAN.

In this course disease is studied from the point of view of disturbed functionation; this and the course previously detailed contrast pathological physiology with pathological anatomy.

5 lectures, 15 hrs. laboratory work a week, 9 weeks.

Prerequisite: Completion of the first-year course in chemical physiology.

**3. Bacteriology.**

Dr. RAHTJEN.

Morphology of bacteria with particular reference to the pathogenic bacteria, parasites and their toxins.

Production of antitoxines within the body. Theories relative to the generation of antitoxines.

Special attention will be given to the study of parasites, including the latest discoveries of Schaudin and Hoffmann.

**4. Autopsy Course.**

Dr. LENNON.

During the fourth year an autopsy course is conducted in the University of California Hospital and the City and County Hospital. The members of the fourth-year class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students.

Two sections of 1 semester each, 4 hrs. a week, except in the event of absence of material. 1 unit.

**Research Department of Hearst Pathological Laboratory.**

The private laboratories of pathology are installed with equipments for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

## MATERIA MEDICA.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica.

### 1. Physiological Action of Drugs.

Dr. SIMMONS.

The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.

Third year, 3 hrs. a week, 10 weeks.

### 2. Materia Medica and Pharmacy.

Dr. SIMMONS.

The course is purely practical, embracing toxicology, the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

Third year, 2 hrs. a week, 27 weeks.

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## MEDICINE.

WILLIAM WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and Practice of Medicine.

CLARENCE QUINAN, M.D., Instructor in Medicine.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.

J. WILSON SHIELS, M.D., Instructor in Medicine.

CHARLES M. COOPER, M.D., Instructor in Medicine.

RACHEL L. ASH, B.S., M.D., Instructor in Medicine.

MILTON B. LENNON, A.B., M.D., Assistant in Medicine.

WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.

PAUL E. BIBER, A.B., M.D., Assistant in Medicine.

PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.

HAROLD P. HILL, B.S., M.D., Assistant in Medicine.

Instruction in medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the

methods of diagnosis, and in the rational employment of therapeutics. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and therefore properly requires a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the fourth year to place the students upon individual practical work.

Work in the department of Principles and Practice of Medicine is carried on by Dr. Moffitt, Dr. Quinan, Dr. C. M. Cooper, Dr. Ash, and Dr. Shiels.

The material of the University Hospital offers unusual advantages to the students, because it is made up wholly of acute cases, and because of the opportunities of working up material in the various laboratories of the school and of following borderline cases into the surgical wards.

Didactic work has been almost wholly dropped, except in occasional reviews of important diseases that may not have presented themselves during the year. Small classes make it possible to take more personal interest in the student's work, and give the student an opportunity of discussing all his cases with the teachers.

Instruction in physical diagnosis is given throughout the year by Drs. Quinan and Ash.

One hour a week throughout the year is devoted to lectures in therapeutics or to practical demonstrations of therapeutic methods at the bedside by Dr. Shiels.

One hour a week throughout the year is given by Dr. Cooper to demonstration of cases with particular reference to diseases of the kidney and their methods of examination.

Bedside clinics are given two hours a week throughout the year by Dr. Moffitt, and one hour a week is given to diseases of the nervous system, as the material of the hospital is particularly rich in nervous cases.

The students are divided into small groups, and made responsible for the histories and laboratory examinations of certain beds throughout the year. They are encouraged to look up literature upon doubtful cases, and are expected to make reports upon certain literature abstracts from time to time.

**1. Physical Diagnosis.** Dr. EBRIGHT and Hospital Internes.

This course is given in the wards of the City and County Hospital and University of California Hospital, and consists in a review of the topographical anatomy of the viscera, in systematic instruction in inspection, palpation, percussion, auscultation, and in the adjuncts to physical diagnosis. The class is divided into sections, insuring individual instruction.

**2. Clinics in Internal Medicine.** Professor KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures, and demonstrations upon the material in the medical ward of the City and County Hospital and University of California Hospital. Students are assigned to the beds for the study of individual cases.

3 hrs. a week, through 2 years.

**3. Clinics in Internal Medicine.** Professor SCHREINER.

This course is conducted at the U. S. A. General Hospital at the Presidio, and consists of individual work at the bedside and in the laboratory under the direction and supervision of Professor Schreiner.

Fourth year, 2 afternoons a week.

**4. Bedside Instruction.** Professor KERR, Drs. EBRIGHT, CASTELHUN, BEERMAN, HILL, LENNON, and BIBER.

The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies.

**SURGERY.**

- ROBERT A. McLEAN, M.D., Emeritus Professor of Clinical Surgery.  
HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.  
THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.  
JAMES M. KENNEDY, A.B., M.D., Honorary Professor of Surgery.  
WALLACE I. TERRY, M.D., Assistant Professor of Surgery.  
HENRY B. A. KUGELER, M.D., Instructor in Surgery.  
HAROLD BRUNN, M.D., Instructor in Surgery.  
RAYMOND RUSS, B.S., M.D., Instructor in Surgery.  
ALFRED NEWMAN, A.B., M.D., Instructor in Surgery.  
LEWIS W. ALLEN, A.B., M.D., Instructor in Surgery.  
TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.  
HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.  
CAMILLUS BUSH, B.S., M.D., Instructor in Surgery.  
HARRY P. ROBARTS, M.D., Assistant in Surgery.  
JACOB SCHWARZ, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years, and while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. The clinical material is found in the wards of the City and County Hospital, the University of California Hospital, and the U. S. A. General Hospital at the Presidio. Cases of minor surgery are treated in the Out-Patient Dispensary. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course. Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, in which papers are read and discussed under the guidance of the professor of the principles and practice of surgery. A similar meeting is conducted for the third-year class by one of the assistants.

**1. General Surgery.**

Professor SHERMAN.

The principles of general surgery are discussed in lectures and recitations illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

From December to April ward classes and operative clinics are added to these.

Third and fourth years, 2 hrs. a week, through 2 years.

**2. Clinical Surgery.**

Professor HUNTINGTON and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment, and asepsis are discussed at the bedside. Special attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anæsthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

Third and fourth years, 3 hrs. a week, through the year.

**3. Clinical Surgery.**

Professor KENNEDY.

This course consists of clinics and ward class work in the operating room and the wards of the U. S. A. General Hospital at the Presidio.

Fourth year, 2 afternoons a week, throughout the year.

**4. Surgical Pathology.**

Dr. RYFKOGEL.

This course will present in a practical way the application of many of those points in the previous work of pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and

their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of microorganisms by means of the lymphatics through the lungs, liver, and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked-eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical.

Third year, 12 hrs. a week, 9 weeks.

**5. Operative Surgery on the Cadaver.**

Dr. KUGELER.

The classical operations are performed by the students of the class individually on the cadaver, imitating as closely as possible the arrangement and technique of the operating room.

Fourth year, 2 hrs. a week, 9 weeks.

**6. Operative Surgery.**

Dr. BUSH.

This is an extension of Course 5, in which the surgery of the abdomen is studied by practical operations under the same technical arrangement as in Course 5.

Fourth year, 2 hrs. a week, 9 weeks.

**7. Wound Dressing, Minor Surgery, and Bandaging.**

Dr. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

Third year, 3 hrs. a week, one half-year.

**8. Ward Classes.**

Dr. L. W. ALLEN.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

Fourth year, 2 hrs. a week, through 1 semester.

**9. Surgical Dispensary.**

Drs. RUSS, BUSH, ROBERTS, and SCHWARTZ.

This course is given upon the ambulatory material at the outpatient department, and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

Third year, 6 hrs. a week, 1 term.

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**MICROSCOPICAL AND CHEMICAL DIAGNOSIS.**

HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology which are of assistance to the clinician in reaching a diagnosis. It aims to act as a connecting link between the work of the preclinical and the clinical years. The course is given almost exclusively by the laboratory method; short explanatory talks are given as the subject-matter demands. A simple, effective, well lighted laboratory is provided in the University Hospital, from the wards of which much of the material is derived. The wards of the City and County Hospital and of St. Luke's Hospital are also utilized for material. Routine instruction is given on the normal and pathological conditions of the blood; particular attention being paid to accuracy in counting and to the study of the different characteristic blood diseases. If material for use is not present in the wards, specimens from the cabinet are used. An effort is made to familiarize the students thoroughly with the recognition and life history of the malarial parasite.

The examination of the urine, normal and pathological, forms an important part of the course, particular attention being paid to the microscopical examination of the sediment.

The examination of the sputum and the analysis of the gastric content are adequately considered.

Considerable time is devoted to the examination of the feces in health and disease, particularly the recognition of parasites and



their ova. Through the courtesy of the officials of the Army General Hospital at the Presidio, use may be made of the abundant tropical material in that institution.

**1. Microscopical and Chemical Diagnosis.**

Dr. ALLEN.

Third year, 4 hrs. a week, throughout the term.

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**OBSTETRICS.**

ALFRED BAKER SPALDING, A.B., M.D., Assistant Professor of Obstetrics.

The work of the Department of Obstetrics is given by lectures, quizzes, demonstrations, clinics, and bedside instruction in the ward of the University Hospital and at the homes of clinic patients.

Throughout the third year lectures are given on normal and abnormal pregnancy, labor, and the puerperium, which are illustrated by means of charts, manikins, and specimens. Individual instruction is given in the delivery room, in the maternity ward, and in the nursery. During the last half of the third year the students are detailed in rotation to serve the regular two weeks' course at the San Francisco Maternity. The minimum requirement is that each student must attend and give personal care to at least five women during confinement.

**1. Lectures on Obstetrics.**

Professor SPALDING.

Third year, lectures and quizzes, 2 hrs. a week, throughout the year.

**2. Clinical Lecture.**

Professor SPALDING.

Third and fourth year, presentation of patients or demonstration of specimens and instruments, 1 hr. a week, throughout the year.

**3. Ward Work.**

Professor SPALDING.

Third and fourth year, practical work in the delivery room, maternity ward and nursery in rotation to individual students.

**4. Dispensary Work.**

Professor SPALDING.

During the last half of the third year students are assigned in rotation for a two weeks' service at the San Francisco Maternity.

Fourth year, 2 hrs. a week, throughout the year.

**GYNECOLOGY.**

CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.

AUGUST J. LARTIGAU, M.D., Instructor in Gynecology.

WILLIAM G. MOORE, M.D., Assistant in Gynecology.

Instruction in gynecology is given during the third and fourth years. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

**1. Clinics in Gynecology.**

Professor VON HOFFMANN and Dr. MOORE.

This course is given upon the material in the wards of the City and County Hospital and the University of California Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room, those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course, instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

Fourth year, 2 hrs. a week, throughout the year.

**2. Lectures in Gynecology.**

Dr. LARTIGAU.

A systematic course of lectures, combined with practical demonstrations illustrating the normal gross and microscopic anatomy, pathology, and symptomatology. Especial emphasis is laid upon pathological work in this course.

Third year, 1 hr. a week, throughout the year.

**3. Dispensary Clinics.**

Drs. MOORE and LARTIGAU.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

Fourth year, 18 hrs. for each section.

**LEGAL MEDICINE.****Lectures.**

Dr. D'ANCONA.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death, and the jurisprudence of insanity.

Fourth year, 1 hr. a week, throughout the year.

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**ELECTIVES.**

The elective clinical subjects offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery, and orthopedic surgery. Instruction in the general aspects of the diseases of children and of the nervous system is comprised in the work of the department of medicine. In the elective subjects of pediatrics and clinical neurology, this general work is supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the department of surgery. This is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose, and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature.

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**PEDIATRICS.**

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.

AUGUST J. LARTIGAU, M.D., Instructor in Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences, and practical work in the Out-Patient Dispensary.

**1. Lectures and Recitations.**

Professor LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

Fourth year, 1 hr. a week, throughout the year.

**2. Dispensary Clinics.**

Dr. BLUM and Dr. LARTIGAU.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

Fourth year, 2 hrs. a week, throughout the year.

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**DISEASES OF THE SKIN.**

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HOWARD MORROW, M.D., Instructor in Diseases of the Skin.

LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.

GEORGE C. CULVER, M.D., Assistant in Diseases of the Skin.

FLORENCE MCCOY HILL, B.S., M.D., Assistant in Diseases of the Skin.

HARRY EVERETT ALDERSON, M.D., Assistant in Diseases of the Skin.

**1. Diseases of the Skin.** Professor MONTGOMERY and Dr. MORROW.

The instruction in the department consists in:

- (a) A review of the histology and microscopic anatomy of the skin.
- (b) The study of the pathology and bacteriology of the various cutaneous lesions. So far as possible the instruction in this aspect of the subject is carried parallel to the clinical study of individual cases. In the event of the absence of direct clinical material bearing upon any particular disease, this plan is supplemented by the demonstration and examination of museum specimens and collected tissues.
- (c) Practical work in the dermatological clinic. Instruction is founded upon anatomy and pathology, as elucidated in the previous sections. The work is purely practical and individual; no didactic teaching is included.

Fourth year, 2 hrs. a week, throughout the year.

## CLINICAL NEUROLOGY.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

The course of instruction in diseases of the nervous system comprises lectures, clinics, demonstrations, and practical work.

**1. Clinic in Neurology.**

Professor NEWMARK.

The work in this course is entirely practical and covers the exhibition of selected dispensary cases and the training of students in the methods of conducting physical examinations on neurological cases and in testing the reactions of degeneration, sense, and perception. Patients suffering from various diseases of the nervous system are shown, questions of diagnosis and prognosis considered, followed by a discussion of the pathological lesions shown by these patients. These discussions are illustrated by numerous pathological specimens prepared by the newer neurological methods.

Fourth year, 1 hr. a week, throughout the year.

Not offered during the session of 1908-09.

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DEPARTMENT OF OPHTHALMOLOGY.

GEORGE HERMAN POWERS, A.M., M.D., Emeritus Professor of Ophthalmology.

VARD H. HULEN, A.M., M.D., Instructor in Ophthalmology.

CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.

EDGAR W. ALEXANDER, B.S., M.D., Assistant in Ophthalmology.

Instruction in ophthalmology is given in the wards and operating rooms of the University of California Hospital and the City and County Hospital and at the Out-Patient Dispensary.

**1. Practical Work in the Physiological Laboratory.**

In the second-year students are instructed in the rudiments of physiological optics, including the theory of refraction, ophthalmoscopy, skiascopy, colors, etc., and in the physiology of the eye. This course is given in the department of physiology in Berkeley.

**2. Ophthalmology.**

Dr. HULEN.

The subjects covered in this course comprise the methods of examining the patient and the external and ophthalmoscopic injuries of the eye; ophthalmic surgery. Special study is made of the eye in its relation to general diseases.

Third year, two hours a week, throughout the year.

**3. Ophthalmoscopy.**

Dr. NAGEL.

The third and fourth year students are instructed in the bedside use of the ophthalmoscope, and the ocular conditions of patients in the medical wards are demonstrated.

**4. Dispensary Clinics.** Dr. ALEXANDER and Hospital Internes.

Students are afforded facilities for personal examination and treatment of ambulatory cases in the out-patient department.

**5. Students of the fourth year have the opportunity of continuing clinical work in ophthalmology throughout the term, and perfecting themselves in the laboratory methods of examination of eye specimens.**

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## OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

ALBERT B. McKEE, Ph.B., M.D., Instructor of Diseases of the Ear, Nose, and Throat.

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital, the University of California Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated in the clinic at the University of California Hospital and the City and County Hospital.

**1. Otology, Rhinology, and Laryngology.**

Dr. McKEE and Assistants.

Instruction in diseases of the ear, nose, and throat is given in the wards of the City and County Hospital, the University of California Hospital, and the Out-Patient Dispensary.

Fourth year, 3 hrs. a week, throughout the year; 1 hr. clinic, 2 hrs. practical work, one half-year.

## DEPARTMENT OF GENITO-URINARY SURGERY.

JOHN MARSHALL WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary Surgery.

**1. Genito-Urinary Surgery.**

Professors WILLIAMSON and SPENCER.

This course is entirely practical and is given in the University of California Hospital and at the Out-Patient Dispensary on ambulatory cases.

4 hrs. a week, throughout the year; 1 clinic a week, 3 hrs. practical work.

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ORTHOPEDIC SURGERY.

— — —, Professor of Orthopedic Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

**1. Orthopedic Surgery.**

Dr. HUNKIN.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces.

Fourth year, 2 hrs. a week, throughout the year.

GRADUATES, 1908.

Lela June Beebe, A.B. (Stanford Univ.).....	San Francisco
LeRoy Hewitt Briggs, Jr.....	Oakland
Alexander Sterling Bunnell, B.S. (Univ. of Cal.).....	Berkeley
Sanford Warren Cartwright, Ph.G., B.S. (Univ. of Cal.).....	Berkeley
Harry Emerson Foster.....	Sacramento
Frank Edward Frates, B.S. (St. Mary's College).....	Ione
Louis Philippe Howe.....	San Francisco
Samuel Nicholas Jacobs, B.S. (Univ. of Cal.).....	Oakland
Hans Coford Johnson.....	San Francisco
Shin Fwe Pond Mooar Jee.....	San Francisco
Frederick Clinton Lewitt, B.S. (Univ. of Cal.).....	San Francisco
Thomas Drummond Mansfield, A.B. (Univ. of Cal.).....	Haywards
Albert Manson Meads, B.S. (Univ. of Cal.).....	Oakland
Lester Newman, B.S. (Univ. of Cal.).....	San Francisco
Alvin Powell.....	Oakland
Robert Thomas Sutherland, B.S. ....	Oakland

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MATRICULATES, 1907-08.

FOURTH-YEAR CLASS.

Lela June Beebe, A.B. (Stanford Univ.).....	San Francisco
LeRoy Hewitt Briggs, Jr.....	Oakland
Alexander Sterling Bunnell, B.S. (Univ. of Cal.).....	Berkeley
Sanford Warren Cartwright, Ph.G., B.S. (Univ. of Cal.).....	Berkeley
Herbert Jacob Cohn.....	Carson City, Nevada
Harry Emerson Foster.....	Sacramento
Frank Edward Frates, B.S. (St. Mary's College).....	Ione
Louis Philippe Howe.....	San Francisco
Samuel Nicholas Jacobs, B.S. (Univ. of Cal.).....	Oakland
Hans Coford Johnson.....	San Francisco
Shin Fwe Pond Mooar Jee.....	San Francisco
Frederick Clinton Lewitt, B.S. (Univ. of Cal.).....	San Francisco
Thomas Drummond Mansfield, A.B. (Univ. of Cal.).....	Haywards



Albert Manson Meads, B.S. (Univ. of Cal.)	Oakland
Lester Newman, B.S. (Univ. of Cal.)	San Francisco
Alvin Powell	Oakland
Robert Thomas Sutherland, B.S.	Oakland

## THIRD-YEAR CLASS.

Harry Wilbur Irwin, B.S.	Berkeley
Charles Leland McVey, B.S.	Oakland
Wallace Longfellow Meyers, Ph.G.	San Francisco
Chester Biven Moore, B.S.	San José
Howard Christian Naffziger, B.S.	Nevada City
Margaret White, A.B.	Berkeley

## SECOND-YEAR CLASS.

Seely Frederick Long, Jr.	San Francisco
Rosalind Wulzen, B.S.	Oakland

## FIRST-YEAR.

Walter Isaac Baldwin	Eureka
Elbridge John Best	Grass Valley
Henry Chesley Bush	San Francisco
William Howard Campbell	Berkeley
Kate Rawlinson Gompertz	Berkeley
Margaret Henderson	Berkeley
Howard Hill Markel	Davis, Illinois
Allan Raymond Powers	San Rafael
Ellen Smith Stadtmüller	San Francisco
Clifford Black Walker	South Pasadena
Augusta Zuber	Los Angeles

**UNIVERSITY OF CALIFORNIA**  
**MEDICAL DEPARTMENT**

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**ANNOUNCEMENT FOR 1909-10**

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**BERKELEY**  
**THE UNIVERSITY PRESS**  
**1909**



## CALENDAR

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### 1909

August 2.—Undergraduate applications for admission to the academic departments and recommendations issued by the principals of accredited schools should be filed with the Recorder of the Faculties at Berkeley on or before August 2. This may be done by mail. Credentials from other universities and from secondary schools outside of California should be filed as early as possible.

August 5.—Academic year begins.

August 5-10.—Entrance examinations at Berkeley for the Academic and Medical Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before Wednesday, August 4. But applications for permits to be sent by mail should be made as far in advance of August 4 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

August 13, 14, 16, 9 a.m. to 12 m.—Office hours of the Dean at California Hall, Berkeley. Registration of first-year and second-year students in the Dean's office, Room 222, California Hall.

August 13, 14, 16, 2-4 p.m.—Registration of students of the third- and fourth-year classes in the Dean's office in the main building of the Medical Department in San Francisco.

August 17.—Class work begins.

September 9.—Admission Day: a holiday.

November 25-27.—Thanksgiving Recess.

December 19.—Christmas vacation begins.

### 1910

January 3.—Second half-year begins.

February 22.—Washington's Birthday: a holiday.

March 23.—Charter Day: a holiday.

May 2.—Examinations begin.

May 18.—Commencement Day.

## REGENTS OF THE UNIVERSITY

### REGENTS EX OFFICIO.

HIS EXCELLENCY JAMES NORRIS GILLET.....	Sacramento
<i>Governor and President of the Regents ex officio.</i>	
HIS HONOR WARREN REYNOLDS PORTER.....	Watsonville
<i>Lieutenant-Governor.</i>	
HON. PHILIP A. STANTON.....	Los Angeles
<i>Speaker of the Assembly.</i>	
HON. EDWARD HYATT.....	Sacramento
<i>State Superintendent of Public Instruction.</i>	
HENRY ALEXANDER JASTRO, ESQ. ....	Bakersfield
<i>President of the State Board of Agriculture.</i>	
RUDOLPH JULIUS TAUSSIG, ESQ. ....	3134 16th street, San Francisco
<i>President of the Mechanics' Institute.</i>	
BENJAMIN IDE WHEELER, Ph.D., LL.D. ....	1820 Scenic avenue, Berkeley
<i>President of the University.</i>	

### APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

	<sup>*Terms</sup> Expire
ISAIAS WILLIAM HELLMAN, ESQ. ....	1918
Wells-Fargo-Nevada National Bank, San Francisco.	
CHESTER ROWELL, M.D. ....	1910
Fresno.	
CHARLES WILLIAM SLACK, Ph.B., LL.B. ....	1910
Kohl Building, San Francisco.	
JACOB BERT REINSTEIN, M.A. ....	1912
838 Mills Building, San Francisco.	

\* The term of the appointed Regents is sixteen years, and terms expire March 1.

JOHN ELIOT BUDD, A.B. ....	1916
Stockton.	
MRS. PHOEBE APPERSON HEARST.....	1914
707 West Coast Life Building, Pine and Leidesdorff streets, San Francisco.	
Pleasanton.	
ARTHUR WILLIAM FOSTER, ESQ. ....	1916
1210 James Flood Building, San Francisco.	
GARRET WILLIAM McENERNEY, ESQ. ....	1920
1277 James Flood Building, San Francisco.	
GUY CHAFFEE EARL, A.B. ....	1918
608 Crocker Building, San Francisco.	
JAMES WILFRED MCKINLEY, B.S. ....	1922
Rooms 432-437, Pacific Electric Building, Los Angeles.	
REV. PETER CHRISTOPHER YORKE, S.T.D. ....	1912
1267 16th avenue, Oakland.	
JOHN ALEXANDER BRITTON, ESQ. ....	1914
925 Franklin street, San Francisco.	
FREDERICK WILLIAM DOHRMANN, ESQ. ....	1920
201 Geary street, San Francisco.	
HON. THOMAS ROBERT BARD.....	1922
Hueneme.	
FRANK SPAULDING JOHNSON, ESQ. ....	1924
California and Front streets, San Francisco.	
WILLIAM HENRY CROCKER, Ph.B. ....	1924
Crocker National Bank, San Francisco.	

OFFICERS OF THE REGENTS.

HIS EXCELLENCY JAMES NORRIS GILLET.....	Sacramento
<i>President.</i>	
VICTOR HENDRICKS HENDERSON, B.L. ....	
.....2345 Telegraph avenue, Berkeley	
<i>Secretary and Land Agent.</i>	
ISAIAS WILLIAM HELLMAN, Jr., Ph.B. ....	
.....Union Trust Company, San Francisco	
<i>Treasurer.</i>	
FLETCHER A. CUTLER, ESQ. ....	506 Crocker Building, San Francisco
<i>Counsel.</i>	

## FACULTY

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BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University,  
*ex officio* President of the Faculty.

ARNOLD A. D'ANCONA, A.B., M.D., Dean.

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and Oper-  
ative Surgery.

GEORGE H. POWERS, A.M., M.D., Emeritus Professor of Ophthalmol-  
ogy.

JAMES M. KENNEDY, A.B., M.D., Honorary Professor of Surgery.

WILLIAM WATT KERR, A.M., M.B., C.M., Professor of Clinical Medi-  
cine.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

JOHN M. WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and  
Practice of Surgery.

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and  
Practice of Medicine.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

JACQUES LOEB, M.D., Professor of Physiology.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

ALFRED B. SPALDING, A.B., M.D., Professor of Obstetrics.

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

FRANK W. BANCROFT, A.M., M.S., Ph.D., Assistant Professor of Phys-  
iology.

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary  
Surgery.

WALLACE I. TERRY, B.S., M.D., Assistant Professor of Surgery.

SAMUEL STEEN MAXWELL, B.S., M.S., Ph.D., Assistant Professor of  
Physiology.

CLARENCE QUINAN, M.D., Assistant Professor of Pathology.

HOWARD MORROW, M.D., Assistant Professor of Diseases of the Skin.

AUGUST J. LARTIGAU, M.D., Assistant Professor of Gynecology.

T. BRAILSFORD ROBERTSON, B.S., Assistant Professor of Physiology.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

- HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica and Therapeutics.
- HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.
- HAROLD BRUNN, M.D., Instructor in Surgery.
- THEODORE C. BURNETT, M.D., Instructor in Physiology.
- GEORGE E. EBRIGHT, M.D., Instructor in Medicine.
- PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.
- ALBERT B. MCKEE, Ph.B., M.D., Instructor in Diseases of the Ear, Nose, and Throat.
- SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.
- RAYMOND RUSS, B.S., M.D., Instructor in Surgery.
- ALFRED NEWMAN, A.B., M.D., Instructor in Surgery.
- TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.
- CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.
- HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.
- J. WILSON SHIELDS, M.D., Instructor in Medicine.
- CAMILLUS BUSH, B.S., M.D., Instructor in Surgery.
- WALTER S. FRANKLIN, M.D., Instructor in Ophthalmology.
- R. LEONA ASH, B.S., M.D., Instructor in Medicine.
- PHILIP RAHTJEN, M.D., Instructor in Bacteriology.
- WILLIAM G. MOORE, M.D., Instructor in Gynecology.
- HARRY P. ROBARTS, M.D., Assistant in Surgery.
- JACOB SCHWARTZ, M.D., Assistant in Surgery.
- MILTON B. LENNON, A.B., M.D., Assistant in Medicine.
- LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.
- HARRY E. ALDERSON, M.D., Assistant in Diseases of the Skin.
- FLORENCE MCCOY HILL, B.S., M.D., Assistant in Diseases of the Skin.
- WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.
- PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.
- GEORGE D. CULVER, M.D., Assistant in Diseases of the Skin.
- EDGAR W. ALEXANDER, B.S., M.D., Assistant in Ophthalmology.
- ANTONIO M. DAL PIAZ, M.D., Assistant in Anatomy.
- A. R. MOORE, Assistant in Physiology.
- ROSALIND WULZEN, B.S., Assistant in Physiology.
- W. F. ALLEN, B.S., Collector and Assistant in Physiology.
- DUDLEY TAIT, M.D., Assistant in Surgery.
- RENÉ BINE, M.D., Assistant in Medicine.
- JAMES LYMAN WHITNEY, M.D., Assistant in Medicine.
- EDWARD F. MILLER, Technical Assistant in Anatomy.



## REQUIREMENTS FOR ADMISSION

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Applicants for admission to the first year of the medical course and applicants for advanced standing must have completed at least two full years of preliminary training in the undergraduate departments of the University of California or of a university of equal standing. As evidence of this preliminary training, they must present a Junior Certificate of this University or its equivalent. The Medical Faculty recommends that students who anticipate entering the College of Medicine acquire a reading knowledge of French and German and include among the studies leading to the Junior Certificate courses in physics, chemistry and zoology of the scope and character of the following courses: Physics 1 and 2A; Chemistry 1, 3, 8A, 8B, and 10A; Zoology 1 and 6.

The State Law governing the practice of medicine in California prescribes that every person before practicing medicine or surgery must produce satisfactory testimonials of good moral character and a diploma issued by some legally chartered medical school, the requirements of which shall have been at the time of granting such diploma in no particular less than those prescribed by the Association of Medical Colleges for that year. For the year 1909, the Association of American Medical Colleges prescribes that every medical student must be registered in a medical college or department for four years and that his preparatory course shall have included two years of Latin, two years of mathematics, two years of English, one year of history, one year of physics, and six years of further credits in languages, literature, history, or science,

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### ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second-, third-, and fourth-year classes only upon examination covering the subjects in which they seek to be accredited. They must first present evidence that they have satisfied the regular matriculation requirements and obtain from the Dean authorization for examination.

## LOCATION.

The work of the first and second years of the medical course is conducted at Berkeley.

The main building of the Medical Department, located at the so-called "Affiliated Colleges" in the western part of San Francisco, at Second and Parnassus avenues, south of Golden Gate Park, is devoted to the work of the third and fourth years.

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BOARDING.

The expense of living in Berkeley and San Francisco is not great. Good board with room rent may be procured at the rate of five dollars per week at a convenient distance from the College buildings.

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CLINICAL FACILITIES.

## THE UNIVERSITY OF CALIFORNIA HOSPITAL.

Through contributions made by charitable persons a hospital equipment has been installed in the main building of the Medical Department at Second and Parnassus avenues, San Francisco. The hospital was opened April 11, 1907, and has been in active operation since.

On the second floor is a well-lighted operating room, with rooms annexed for anesthetizing, sterilizing, and X-ray apparatus. On this floor are two wards of sixteen beds each and one of twenty-eight beds devoted to medicine, surgery, and gynecology. On the floor above is a ward of ten beds devoted to obstetrical cases. Adjoining the ward are separate rooms for patients in the first and second stages of labor.

The hospital is designed for the care of the sick and for instruction and research in medicine. It is under the complete control of the Board of Regents of the University.

## CITY AND COUNTY HOSPITAL OF SAN FRANCISCO.

The ward work and clinics held in the University Hospital are supplemented by similar courses given in the City and County Hospital. The medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department.

## PRESIDIO MILITARY HOSPITAL.

Through the courtesy of the commanding officer of the medical department of the military post at the Presidio, students of the University have access to the wards of this hospital, in which they study medical and surgical cases under the direction of Major James M. Kennedy of the medical service of the United States Army.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

## PRIVATE HOSPITALS.

During the session clinics are held from time to time in three of the private hospitals of San Francisco. There is no reason to doubt that these opportunities will be afforded the students during 1909-10 through the kindness of the officials of these institutions.

## OUT-PATIENT DEPARTMENT.

Instruction in ambulatory cases is given in the main building of the Medical Department in San Francisco.

## THE SAN FRANCISCO MATERNITY.

Arrangements have been made with the Board of Directors of the San Francisco Maternity for instruction in practical obstetrics to members of the fourth-year class. Each student is detailed to the out-patient service for a period of two weeks, during which time he makes examinations of pregnant women; attends, with an interne, patients in labor and makes daily post-partum visits to the patient's home. Finally he examines women post-partum for discharge, reporting on the condition of both mother and baby. During the past year two hundred and nine patients were treated at the institution.

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HOSPITAL APPOINTMENTS.

The position of interne in the University of California Hospital is open each year to six members of the graduating class who recommend themselves to the Faculty by their general fitness for the appointment. Internes serve for one year and have opportunities for obtaining an invaluable experience in various fields of medicine and surgery. Internships in the City and County Hospital also are

awarded to members of the graduating class upon the recommendation of the Faculty. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the Medical Department or by competitive examination.

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### FEES.

#### *First Year.*

Tuition .....	\$150.00
Dissecting material .....	10.00

The fees are payable at the time of matriculation. Students may pay one-half of the tuition fee at the beginning of each term.

A key and breakage deposit of \$25 is required for the use of lockers and to cover the cost of material used in the laboratories and damage to College buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5 a year is charged for the use of a microscope, and \$2 for an immersion lens. Each student must provide himself with a microscope.

A rental of \$2.50 is charged for the use of a set of bones and a deposit of \$7.50 as security for their return in good condition.

#### *Second Year.*

Tuition .....	\$150.00
Dissecting material .....	10.00
A key and breakage deposit of .....	25.00

#### *Third Year.*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

#### *Fourth Year.*

Tuition .....	\$150.00
Graduation .....	25.00
A key and breakage deposit of .....	10.00

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### LIBRARY.

The library contains about 3,000 volumes, including many of the current text-books and some of the better monographs. Along certain lines the library is particularly good. It is the policy of the department to make the collections uniform and to obtain complete

files of the most important periodicals published in English, French and German. Among the journals in the library are the following:

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anatomische Hefte, Annals of Surgery, Archiv für Anatomie und Entwicklungsgeschichte, Archiv für Entwicklungsmechanik der Organismen, Archiv für Klinische Chirurgie, Archiv für Pathologische Anatomie und Physiologie, Archives of Surgery, Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berliner Klinische Wochenschrift, Boston Medical and Surgical Journal, British Medical Journal, Centralblatt für Bakteriologie und Parasitenkunde, Centralblatt für Chirurgie, Centralblatt für Gynecologie, Centralblatt für Klinische Medizin, Congrès Français de Chirurgie, Deutsche Medicinische Wochenschrift, Ergebnisse der Anatomie und Entwicklungsgeschichte, Fortschritte der Medizin, Jahrbücher der Gesamten Medizin, Jahresbericht der Gesamten Medizin, Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte, Jahresbericht über die Fortschritte der Anatomie und Physiologie, Jahresbericht über Pathogenen Mikroorganismen, Journal of the American Medical Association, Journal of Comparative Neurology, Journal of Experimental Medicine, Journal of Hygiene, Journal of Medical Research, London Lancet, Medical Record, Medical Review of Reviews, Morphologische Arbeiten, New York Medical Journal, Philadelphia Medical Journal, Revue de Chirurgie, Transactions of American Surgical Association, Verhandlungen der Deutschen Gesellschaft für Chirurgie, Wiener Medizinische Wochenschrift, Zeitschrift für Chirurgie, Zeitschrift für Morphologie und Anthropologie.

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## ORGANIZATION OF INSTRUCTION.

### SESSION OF 1909-10.

**Summary of Courses.** Instruction is divided into three classes: didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory sessions, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value.

This is likewise the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of

practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated. The advantages of concentration are many. The system offers more work to the student and is conducive to favorable conditions of study, in that students in the prolonged and consecutive periods apply themselves better and enter more deeply into the subject. It also grants to the students much more free time, time of the greatest value for purposes of private study or advanced work.

It is believed that the students on account of this free time will take advantage of the elective courses offered by the departments of Anatomy, Physiology, and Pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

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#### CLASS STANDING AND EXAMINATION.

For the determination of class standing for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendation for internships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be

reached in three ways; by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

*First Year.*—Microscopic anatomy, chemical physiology, elementary physiology.

*Second Year.*—Systematic human anatomy, neurology, general physiology, pharmacology, morphological pathology, chemical pathology, and bacteriology.

*Third Year.*—Therapeutics, materia medica, obstetrics, and general surgery.

*Fourth Year.*—Internal medicine, clinical medicine, general surgery, clinical surgery, gynecology, operative obstetrics, legal medicine, and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of the departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for reexamination at the beginning of the next academic year, or be required to repeat the course. The Faculty

reserves the right to sever the connection of any student with the Medical Department at any time for what it deems either mental or moral unfitness for a career in medicine.

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#### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.
3. He must have done the required work and passed the stated examinations.
4. He must have paid in full the college fees.



## COURSES OF INSTRUCTION.

### ANATOMY.

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

ANTONIO MINOTTI DAL PIAZ, M.D., Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiolog-

ical aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize himself with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with the laboratory drawings and contain an epitome of the student's notes and collateral reading. The drawings are made from preparations of human material wherever this is possible.

#### 1. Histology.

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In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. This study is always comparative.

First year, 2 laboratory periods, 2 lectures a week, first term. 4 units.

#### 2. Microscopic Organology.

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The organs are discussed with reference to their form, arrangement, and the number of the fundamental tissues composing them, with special reference to their structural and functional relations to other organs. In each case the student begins their study with the structures in situ, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 2 laboratory periods, 2 lectures a week, second term. 4 units.

### 3. Neurology.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with the view of tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

Second year, 2 lectures, 2 laboratory periods a week, first term. 4 units.

## SYSTEMATIC HUMAN ANATOMY.

The courses in systematic anatomy are given by practical work entirely. There are no lectures and formal quizzes are given only at the completion of the dissection of a part assigned. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of the visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin-hardened sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

### Osteology.

Professor MOODY.

Each student is loaned a skeleton and is required to model in clay each bone in the body.

First year, 2 half-days a week, first term. 2½ units.

### 5. Head and Neck.

Professor MOODY.

5 half-days a week, for 8 weeks.

### 6. Arm and Thorax.

Professor MOODY.

5 half-days a week, for 8 weeks.

### 7. Leg and Abdominal Viscera.

Professor MOODY.

5 half-days a week, for 8 weeks.

8. Topographical and Applied Anatomy. Professor MOODY.  
The entire body, sections of the body, muscles, and special dissections will be used in this course with the intent to enable the student to become more familiar with structural interrelations and to assemble information obtained in preceding dissections.  
Prerequisite: dissection of the entire body.  
5 half-days a week, for 8 weeks. 2½ units.
9. Special Anatomy for Physicians and Advanced Students. Professor MOODY.  
This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis, and abdominal viscera. The work is largely independent. A limited number of regular students will be permitted to take this course as an elective after finishing the required work of the department.  
Hours arranged to suit applicants. 4-8 units.
10. Research. Professors ——— and MOODY.  
Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. The course also gives opportunity for those wishing to gain experience in special Histological Technique and in the construction of papers for publication. If the results obtained merit it, they will be published. To cover the cost of material expensive to obtain, chemicals, etc., a laboratory fee of \$5 will be charged. Hours optional.
11. Histological Technique. Mr. MILLER.  
This course is designed for those wishing to further familiarize themselves with the general and special methods of obtaining, fixing, embedding, sectioning, staining, and mounting material for microscopical examination. The course is optional. It cannot be substituted for work required in the College of Medicine. Hours to be arranged. Laboratory fee to cover cost of reagents and material, \$10.

### PHYSIOLOGY.

- JACQUES LOEB, M.D., Professor of Physiology.  
ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.  
\*FRANK W. BANCROFT, Ph.D., Assistant Professor of Physiology.  
SAMUEL STEEN MAXWELL, Ph.D., Assistant Professor of Physiology.  
T. BRAILSFORD ROBERTSON, Ph.D., D.Sc., Assistant Professor of Physiology.  
THEODORE C. BURNETT, M.D., Instructor in Physiology.  
ROSALIND WULZEN, B.S., Assistant in Physiology.  
W. F. ALLEN, B.S., Collector and Assistant in Physiology.  
A. R. MOORE, Assistant in Physiology.

\*Absent on leave, 1909-10.

The courses in Physiology are arranged to meet the needs of two classes of students.

#### A. FOR STUDENTS IN ALL COLLEGES.

For the general student who wishes to obtain some elementary information concerning the subject-matter and methods of physiology, course 1 is offered. No prerequisites are required for this course.

For the Science and General Students the prerequisites for a further study of physiology are as follows: Matriculation Physics and Chemistry; Chemistry 1. No Zoology, Botany, Histology or Anatomy is required, but a student having these latter qualifications in sufficient degree may be permitted to drop the requirement Chemistry 1. For the Science and General Students the following series of courses is offered: 1, 2, 5, 11A, 11B, 12, and 13. These courses are all related and each one serves as an introduction to the course immediately following it; they may, however, be taken in any order or separately, provided the student has, in the opinion of the instructor, sufficient knowledge of related subject-matter to enable him to carry on the work intelligently.

#### B. FOR MEDICAL STUDENTS.

For the Medical Student the prerequisites are as prescribed for the College of Medicine and for these the following series of courses is required: 2, 3, 4, 5, and 6. Course 2 may be taken either in the pre-medical years or in the Freshman year of the medical course.

Finally, attention should be called to the fact that the equipment of the department offers unusual opportunities for research, both in the Rudolph Spreckels Laboratory at Berkeley and in the Herzstein Research Laboratory at New Monterey.

#### FOR STUDENTS IN ALL COURSES.

##### LOWER DIVISION COURSES.

##### 1. Introduction to Experimental Biology.

Assistant Professor ROBERTSON.

Illustrations of life-phenomena. Laboratory with occasional lectures. Free elective.

6 hrs., second half-year; 3 units. M W, 1-4.

##### UPPER DIVISION COURSES.

##### 2. Experimental Biology and General Physiology. Professor LOEB.

Dynamics and general theory of life-phenomena.

Lectures 2 hours, laboratory 6 hours, first half-year; 4 units.  
M W, 1-5. Free elective.

5. Physiology of the Nervous System and Special Senses.  
Assistant Professor MAXWELL.  
Lectures 3 hours, laboratory 9 hours, second half-year; 6 units,  
M W F, 1-5. Free elective.
- 11A. Advanced Experimental Biology. (Mj.) Professor LOEB.  
Laboratory three afternoons a week with occasional lectures;  
first half-year. 4 units.
- 11B. Advanced Chemical Biology. (Mj.) Assistant Professor ROBERTSON.  
Laboratory three afternoons a week with occasional lectures;  
second half-year. 4 units.
12. Research Work in Physiology. Graduate.  
Professor LOEB and Assistant Professor ROBERTSON.  
Students who wish to take this course should apply personally  
to Professor Loeb.
13. Seminar. Undergraduate or Graduate. Professor LOEB.  
First half-year. M, 4-5. Open to students of courses 2, 5, 11A,  
11B and 12.

FOR MEDICAL STUDENTS.

2. Experimental Biology and General Physiology. Professor LOEB.  
Dynamics and general theory of life-phenomena.  
Lectures 2 hours, laboratory 6 hours, first half-year, Freshman  
year; 4 units. M W, 1-5.
3. Physiological Chemistry. Dr. QUINAN.  
Physiology of digestion, metabolism and animal heat.  
Lectures 3 hours, laboratory 9 hours, first half-year, Freshman  
year; 6 units. M W F, 8-12.
4. Physiology of the Blood, Circulation, Respiration, Muscle, Nerve,  
Secretion and Reproduction. Assistant Professor MAXWELL.  
Lectures 3 hours, laboratory 9 hours, first half-year, Freshman  
year; 6 units. Tu Th S, 8-12.
5. Physiology of the Nervous System and Special Senses. Assistant Professor MAXWELL.  
Lectures 3 hours, laboratory 9 hours, second half-year, Sophomore  
year; 6 units. M W F, 1-5.
6. Pharmacology. Assistant Professor ROBERTSON.  
Lectures 2 hours, laboratory 3 hours; first half-year, Sophomore  
year; 3 units. Tu, 1-5; Th, 1-2.

**PATHOLOGY.**

ALONZO ENGLEBERT TAYLOR, M.D., Professor of Pathology.

CLARENCE QUINAN, Assistant Professor of Pathology.

PHILIP RAHTJEN, M.D., Instructor in Bacteriology.

WILLIAM T. JANE, Technical Assistant.

Instruction in pathology is given in the Hearst Laboratory of Pathology in Berkeley during the second year, and at the University of California Hospital and the City and County Hospital in San Francisco during the fourth year.

1. Morphological Pathology.

Professor TAYLOR.

The course includes instruction upon the chief organs and tissues in the order of their importance.

4 lectures, 12 hrs. laboratory work a week, 18 weeks.

Prerequisite: Completion of the course in first-year histology and microscopic anatomy.

2. Chemical Pathology.

Professor TAYLOR.

In this course disease is studied from the point of view of disturbed functionation; this and the course previously detailed contrast pathological physiology with pathological anatomy.

5 lectures, 15 hrs., laboratory work a week, 9 weeks.

Prerequisite: Completion of the first-year course in chemical physiology.

3. Bacteriology.

Morphology of bacteria with particular reference to the pathogenic bacteria, parasites and their toxins.

Production of antitoxines within the body. Theories relative to the generation of antitoxines.

Special attention will be given to the study of parasites, including the latest discoveries of Schaudin and Hoffman.

4. Autopsy Course.

During the fourth year an autopsy course is conducted in the University of California Hospital and the City and County Hospital. The members of the fourth-year class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students.

Two sections of 1 semester each, 4 hrs. a week, except in the event of absence of material. 1 unit.

Research Department of Hearst Pathological Laboratory.

The private laboratories of pathology are installed with equipments for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

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### MATERIA MEDICA.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica.

1. Physiological Action of Drugs. Dr. SIMMONS.  
The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.  
Third year, 3 hrs. a week, 10 weeks.
2. Materia Medica and Pharmacy. Dr. SIMMONS.  
The course is purely practical, embracing toxicology, the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.  
Third year, 2 hrs. a week, 27 weeks.

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### MEDICINE.

WILLIAM WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine.  
HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and Practice of Medicine.  
GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
J. WILSON SHIELS, M.D., Instructor in Medicine.  
R. LEONA ASH, B.S., M.D., Instructor in Medicine.  
MILTON B. LENNON, A.B., M.D., Assistant in Medicine.  
WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.  
PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.  
RENÉ BINE, M.D., Assistant in Medicine.  
JAMES LYMAN WHITNEY, M.D., Assistant in Medicine.

Instruction in medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the methods of diagnosis, and in the rational employment of therapeutic



sis. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and, therefore, properly requires a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the fourth year to place the students upon individual practical work.

Work in the department of Principles and Practice of Medicine is carried on by Dr. Moffitt, Dr. Ash, and Dr. Shiels.

The material of the University Hospital offers unusual advantages to students, because it is made up wholly of acute cases, and because of the opportunities of working up material in the various laboratories of the school and of following borderline cases into the surgical wards.

Didactic work has been almost wholly dropped, except in occasional reviews of important diseases that may not have presented themselves during the year. Small classes make it possible to take more personal interest in the student's work, and give the student an opportunity of discussing all his cases with the teachers.

Instruction in physical diagnosis is given throughout the year by Dr. Ash and Dr. Ebricht.

One hour a week throughout the year is devoted to lectures in therapeutics or to practical demonstrations of therapeutic methods at the bedside by Dr. Shiels.

One hour a week throughout the year is given to demonstration of cases with particular reference to diseases of the kidney and their methods of examination.

Bedside clinics are given two hours a week throughout the year by Dr. Moffitt, and one hour a week is given to diseases of the nervous system, as the material of the hospital is particularly rich in nervous cases.

The students are divided into small groups, and made responsible for the histories and laboratory examinations of certain beds throughout the year. They are encouraged to look up literature upon doubtful cases, and are expected to make reports upon certain literature abstracts from time to time.

#### 1. Physical Diagnosis. Dr. EBRICHT and Hospital Internes.

This course is given in the wards of the City and County Hospital and University of California Hospital, and consists in a review of the topographical anatomy of the viscera, in

systematic instruction in inspection, palpitation, percussion, auscultation, and in the adjuncts to physical diagnosis. The class is divided into sections, insuring individual instruction.

2. Clinics in Internal Medicine. Professor KERR.  
This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures, and demonstrations upon the material in the medical ward of the City and County Hospital and University of California Hospital. Students are assigned to the beds for study of individual cases.  
3 hrs. a week, through 2 years.
3. Clinics in Internal Medicine.  
This course is conducted at the U. S. A. General Hospital at the Presidio, and consists of individual work at the bedside and in the laboratory.  
Fourth year, 1 afternoon a week.

4. Bedside Instruction. Professor KERR, Drs. EBRIGHT, CASTLEHUN, and BEERMAN.  
The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies..

### **SURGERY.**

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical Surgery.  
HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.  
THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.  
JAMES M. KENNEDY, A.B., M.D., Honorary Professor of Surgery.  
WALLACE I. TERRY, M.D., Assistant Professor of Surgery.  
HENRY B. A. KUGELER, M.D., Instructor in Surgery.  
HAROLD BRUNN, M.D., Instructor in Surgery.  
RAYMOND RUSS, B.S., M.D., Instructor in Surgery.  
ALFRED NEWMAN, A.B., M.D., Instructor in Surgery.  
TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.  
HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.  
CAMILLUS BUSH, B.S., M.D., Instructor in Surgery.  
HARRY P. ROBERTS, M.D., Assistant in Surgery.  
JACOB SCHWARZ, M.D., Assistant in Surgery.  
DUDLEY TAIT, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years, and while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. The clinical material is found in the wards of the City and County Hospital, the University of California Hospital, and the U. S. A. General Hospital at the Presidio. Cases of minor surgery are treated in the Out-Patient Dispensary. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course. Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, in which papers are read and discussed under the guidance of the professor of the principles and practice of surgery. A similar meeting is conducted for the third-year class by one of the assistants.

#### 1. General Surgery.

Professor SHERMAN.

The principles of general surgery are discussed in lectures and recitations illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

From December to April ward classes and operative clinics are added to these.

Third and fourth years, 2 hrs. a week, through 2 years.

#### 2. Clinical Surgery.

Professor HUNTINGTON and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the University of California Hospital and the City and County Hospital. Surgical Pathology, general questions of diagnosis, wound treatment, and asepsis are discussed at the bedside. Special attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anesthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings, and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

Third and fourth years, 3 hrs. a week, through the year.

#### 3. Clinical Surgery.

Professor KENNEDY.

This course consists of clinics and ward class work in the operating room and the wards of the U. S. A. General Hospital at the Presidio.

Fourth year, 1 afternoon a week, throughout the year.

4. Surgical Pathology.

Dr. RYFKOGEL.

This course will present in a practical way the application of many of those points in the previous work of pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of microorganisms by means of the lymphatics through the lungs, liver, and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked-eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical.

Third year, 12 hrs. a week, 9 weeks.

5. Operative Surgery on the Cadaver.

Dr. KUGELER.

The classical operations are performed by the students of the class individually on the cadaver, imitating as closely as possible the arrangement and technique of the operating room.

Fourth year, 2 hrs. a week, 9 weeks.

6. Operative Surgery.

Dr. BUSH.

In this course the surgery of the abdomen is studied by practical operations under the same technical arrangement as in Course 5.

Third year, 2 hrs. a week, 9 weeks.

7. Wound Dressing, Minor Surgery, and Bandaging.

Dr. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

Third year, 3 hrs. a week, one half-year.

8. Ward Classes.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

Fourth year, 2 hrs. a week, through 1 half-year.

### 9. Surgical Dispensary.

Drs. RUSS, BUSH, ROBERTS, and SCHWARTZ.

This course is given upon the ambulatory material at the outpatient department, and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

Third year, 6 hrs. a week, 1 term.

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### MISROSCOPICAL AND CHEMICAL DIAGNOSIS.

HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology which are of assistance to the clinician in reaching a diagnosis. It aims to act as a connecting link between the work of the preclinical and the clinical years. The course is given almost exclusively by the laboratory method; short explanatory talks are given as the subject-matter demands. A simple, effective, well lighted laboratory is provided in the University Hospital, from the wards of which much of the material is derived. The wards of the City and County Hospital and of St. Luke's Hospital are also utilized for material. Routine instruction is given on the normal and pathological conditions of the blood; particular attention being paid to accuracy in counting and to the study of the different characteristic blood diseases. If material for use is not present in the wards, specimens from the cabinet are used. An effort is made to familiarize the students thoroughly with the recognition and life history of the malarial parasite.

The examination of the urine, normal and pathological, forms an important part of the course, particular attention being paid to the microscopical examination of the sediment.

The examination of the sputum and the analysis of the gastric content are adequately considered.

Considerable time is devoted to the examination of the feces in health and disease, particularly the recognition of parasites and their ova. Through the courtesy of the officials of the Army General Hospital at the Presidio, use may be made of the abundant tropical material in that institution.

#### 1. Microscopical and Chemical Diagnosis.

Dr. ALLEN.

Third year, 4 hrs. a week, throughout the term.

**OBSTETRICS.**

ALFRED BAKER SPALDING, A.B., M.D., Professor of Obstetrics.

The work of the Department of Obstetrics is given by lectures, quizzes, demonstrations, clinics, and bedside instruction in the ward of the University Hospital and at the homes of clinic patients.

Throughout the third year lectures are given on normal and abnormal pregnancy, labor, and the puerperium, which are illustrated by means of charts, manikins, and specimens. Individual instruction is given in the delivery room, in the maternity ward, and in the nursery. During the last half of the third year the students are detailed in rotation to serve the regular two weeks' course at the San Francisco Maternity. The minimum requirement is that each student must attend and give personal care to at least five women during confinement.

1. Lectures on Obstetrics. Professor SPALDING.  
Third year, lectures and quizzes, 2 hrs. a week, throughout the year.
2. Clinical Lecture. Professor SPALDING.  
Third and fourth year, presentation of patients or demonstration of specimens and instruments, 1 hr. a week, throughout the year.
3. Ward Work. Professor SPALDING.  
Third and fourth year, practical work in the delivery room, maternity ward and nursery in rotation to individual students.
4. Dispensary Work. Professor SPALDING.  
During the last half of the third year students are assigned in rotation for a two weeks' service at the San Francisco Maternity.

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**GYNECOLOGY.**

CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.

AUGUST J. LARTIGAU, M.D., Assistant Professor of Gynecology.

WILLIAM G. MOORE, M.D., Instructor in Gynecology.

Instruction in gynecology is given during the third and fourth years. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

## 1. Clinics in Gynecology.

Professor VON HOFFMAN and Dr. MOORE.

This course is given upon the material in the wards of the City and County Hospital and the University of California Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room, those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course, instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

Fourth year, 2 hrs. a week, throughout the year.

## 2. Lectures in Gynecology.

Professor VON HOFFMAN.

A systematic course of lectures.

Fourth year, 1 hr. a week, throughout the year.

## 3. Demonstrations in Gynecology.

Professor LARTIGAU.

A systematic course of lectures, combined with practical demonstrations illustrating the normal gross and microscopic anatomy, pathology, and symptomatology. Especial emphasis is laid upon pathological work in this course.

Third year, 1 hr. a week, throughout the year.

## 4. Dispensary Clinics.

Dr. MOORE.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

Fourth year, 18 hrs. for each section.

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**LEGAL MEDICINE.**

## Lectures.

Dr. D'ANCONA.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death, and the jurisprudence of insanity.

Fourth year, 1 hr. a week, throughout the year.

## ELECTIVES.

The elective clinical subjects offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery, and orthopedic surgery. Instruction in the general aspects of the diseases of children and of the nervous system is comprised in the work of the department of medicine. In the elective subjects of pediatrics and clinical neurology, this general work is supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the department of surgery. This is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose, and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature.

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PEDIATRICS.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences, and practical work in the Out-Patient Dispensary.

## 1. Lectures and Recitations.

Professor LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

Fourth year, 1 hr. a week, throughout the year.

## 2. Dispensary Clinics.

Dr. BLUM.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

Fourth year, 2 hrs. a week, throughout the year.



## DISEASES OF THE SKIN.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HOWARD MORROW, M.D., Assistant Professor of Diseases of the Skin.

LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.

GEORGE D. CULVER, M.D., Assistant in Diseases of the Skin.

FLORENCE MCCOY HILL, B.S., M.D., Assistant in Diseases of the Skin.

HARRY EVERETT ALDERSON, M.D., Assistant in Diseases of the Skin.

1. Diseases of the Skin. Professors MONTGOMERY and MORROW.

The instruction in the department consists in:

- (a) A review of the histology and microscopic anatomy of the skin.
- (b) The study of the pathology and bacteriology of the various cutaneous lesions. So far as possible the instruction in this aspect of the subject is carried parallel to the clinical study of individual cases. In the event of the absence of direct clinical material bearing upon any particular disease, this plan is supplemented by the demonstration and examination of museum specimens and collected tissues.
- (c) Practical work in the dermatological clinic. Instruction is founded upon anatomy and pathology, as elucidated in the previous sections. The work is purely practical and individual; no didactic teaching is included.

Fourth year, 2 hrs. a week, throughout the year.

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CLINICAL NEUROLOGY.

LEO NEWMARK, M.D., Professor of Clinical Neurology.

The course of instruction in diseases of the nervous system comprises lectures, clinics, demonstrations, and practical work.

1. Clinic in Neurology. Professor NEWMARK.

The work in this course is entirely practical and covers the exhibition of selected cases and the training of students in the methods of conducting physical examinations on neurological cases and in testing the reactions of degeneration, sense, and perception. Patients suffering from various diseases of the nervous system are shown, questions of diagnosis and prognosis considered, followed by a discussion of the pathological lesions shown by these patients. These discussions are illustrated by numerous pathological specimens prepared by the newer neurological methods.

Fourth year, 1 hr. a week, throughout the year.

Not offered during the session of 1908-09.

2. A Brief Course of Lectures on Psychiatry. Professor NEWMARK.

## DEPARTMENT OF OPHTHALMOLOGY.

GEORGE HERMAN POWERS, A.M., M.D., Emeritus Professor of Ophthalmology.

CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.

W. SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.

EDGAR W. ALEXANDER, B.S., M.D., Assistant in Ophthalmology.

Instruction in ophthalmology is given in the wards and operating rooms of the University of California Hospital and the City and County Hospital and at the Out-Patient Dispensary.

1. Practical Work in the Physiological Laboratory.

In the second-year students are instructed in the rudiments of physiological optics, including the theory of refraction, ophthalmoscopy, skiascopy, colors, etc., and in the physiology of the eye. This course is given in the department of physiology in Berkeley.

2. Ophthalmology.

Drs. NAGEL and FRANKLIN.

The subjects covered in this course comprise the methods of examining the patient and the external and ophthalmoscopic diseases of the eye; ophthalmic surgery. Special study is made of the eye in its relation to general diseases. Students of the fourth year have the opportunity of continuing clinical work in ophthalmology throughout the term, and perfecting themselves in the laboratory methods of examination of eye specimens.

Fourth year, 2 hrs. a week, throughout the year.

3. Ophthalmoscopy.

Dr. BURNETT.

The third-year students are instructed in the bedside use of the ophthalmoscope, and the ocular conditions of patients in the medical wards are demonstrated.

4. Dispensary Clinics.

Drs. NAGEL, FRANKLIN and ALEXANDER.

Students are afforded facilities for personal examination and treatment of ambulatory cases in the out-patient department.

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OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

ALBERT B. MCKEE, Ph.B., M.D., Instructor of Diseases of the Ear, Nose, and Throat.

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital, the University of California Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated in the clinic at the University of California Hospital and the City and County Hospital.

## 1. Otology, Rhinology, and Laryngology.

Dr. McKee and Assistants.

Instruction in diseases of the ear, nose, and throat is given in the wards of the City and County Hospital, the University of California Hospital, and the Out-Patient Dispensary.

Fourth year, 3 hrs. a week, throughout the year; 1 hr. clinic, 2 hrs. practical work, one half-year.

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## DEPARTMENT OF GENITO-URINARY SURGERY.

JOHN MARSHALL WILLIAMSON, M.D., Professor of Genito-Urinary Surgery.

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary Surgery.

## 1. Genito-Urinary Surgery.

Professors WILLIAMSON and SPENCER.

This course is entirely practical and is given in the University of California Hospital and at the Out-Patient Dispensary on ambulatory cases.

1 hr. a week, throughout the year; 1 clinic a week.

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## ORTHOPEDIC SURGERY.

— — —, Professor of Orthopedic Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

## 1. Orthopedic Surgery.

Dr. HUNKIN.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces.

Fourth year, 2 hrs. a week, throughout the year.

## GRADUATES, 1909.

Herbert Jacob Cohn.....	Carson City, Nevada
Charles Leland McVey, B.S.....	Oakland
Wallace Longfellow Meyers, Ph.G.....	San Francisco
Howard Christian Naffziger, B.S.....	Nevada City
Margaret White, A.B.....	Berkeley

## MATRICULATES, 1908-09.

## FOURTH-YEAR CLASS.

Harry Wilbur Irwin, B.S.....	Berkeley
Charles Leland McVey, B.S.....	Oakland
Wallace Longfellow Meyers, Ph.G.....	San Francisco
Chester Biven Moore, B.S.....	San José
Howard Christian Naffziger, B.S.....	Nevada City
Margaret White, A.B.....	Berkeley

## THIRD-YEAR CLASS.

Marian Hooker .....	Los Angeles
Seely Frederick Long, Jr.....	San Francisco

## SECOND-YEAR CLASS.

Walter Isaac Baldwin, B.S.....	Eureka
Elbridge John Best, B.S.....	Grass Valley
Lloyd Bryan .....	Pepperwood
Henry Chesley Bush.....	San Francisco
William Howard Campbell, B.S.....	Berkeley
Kate Rawlinson Gompertz, B.S.....	Berkeley
Margaret Henderson, B.S.....	Berkeley
Howard Hill Markel, A.B.....	Davis, Illinois
Allan Raymond Powers, B. S.....	San Rafael
Ellen Smith Stadtmüller, A.B.....	San Francisco

## FIRST-YEAR CLASS.

Samuel E. Bailey .....	Berkeley
Ernest W. Cleary.....	Berkeley
Ruby Cunningham .....	Berkeley
Linwood Dozier .....	Oakland
Carl L. Hoag .....	Berkeley
Milan E. Hunt .....	Oakland
Marjorie M. Johnson .....	Berkeley
F. L. Kelly .....	Berkeley
Bess G. Lewis .....	Berkeley
Herbert E. Long .....	Berkeley
Ann L. Martin .....	Berkeley
Charles H. Nelson .....	Berkeley
Dewey R. Powell .....	Berkeley
Lionel D. Prince .....	San Francisco
Ruth C. Risdon .....	Berkeley
Clifford D. Sweet .....	Berkeley
C. B. Walker .....	Berkeley



UNIVERSITY OF CALIFORNIA  
MEDICAL DEPARTMENT

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ANNOUNCEMENT FOR 1910-11

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BERKELEY  
THE UNIVERSITY PRESS  
1910



## CALENDAR.

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1910.

August 8.—Undergraduate applications for admission to the Academic and Medical Departments, with credentials, should be filed with the Recorder of the Faculties at Berkeley on or before August 8. This may be done by mail.

August 11.—Academic year begins.

August 11-16.—Entrance examinations at Berkeley for Freshman standing in the Academic Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before Wednesday, August 10. But applications for permits to be sent by mail should be made as far in advance of August 10 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

August 19, 20, 22, 9 a.m. to 12 m.—Office hours of the Dean at California Hall, Berkeley. Registration of first-year and second-year students in the Dean's office, California Hall.

August 20, 22, 2-4 p.m.—Registration of students of the third- and fourth-year classes in the Dean's office in the main building of the Medical Department in San Francisco.

August 22.—Class work begins.

September 9.—Admission Day: a holiday.

November 24-26.—Thanksgiving Recess.

December 25.—Christmas vacation begins.

1911.

January 9.—Second half-year begins.

February 22.—Washington's Birthday: a holiday.

March 23.—Charter Day: a holiday.

May 8.—Examinations begin.

May 17.—Commencement Day.



## REGENTS OF THE UNIVERSITY.

### REGENTS EX OFFICIO.

HIS EXCELLENCY JAMES NORRIS GILLET	Sacramento
<i>Governor and President of the Regents ex officio.</i>	
HIS HONOR WARREN REYNOLDS PORTER	Watsonville
<i>Lieutenant-Governor.</i>	
HON. PHILIP A. STANTON	202 Union Trust Bldg., Los Angeles
<i>Speaker of the Assembly.</i>	
HON. EDWARD HYATT	Sacramento
<i>State Superintendent of Public Instruction.</i>	
HON. HENRY ALEXANDER JASTRO	1704 Nineteenth street, Bakersfield
<i>President of the State Board of Agriculture.</i>	
RUDOLPH JULIUS TAUSSIG, Esq.	
<i>Main and Mission streets, San Francisco</i>	
<i>President of the Mechanics' Institute.</i>	
BENJ. IDE WHEELER, Ph.D., LL.D.	1820 Scenic avenue, Berkeley
<i>President of the University.</i>	

### APPOINTED REGENTS.

The names are arranged in the order of original accession to the Board.

	*Terms Expire
ISAIAS WILLIAM HELLMAN, Esq.	1918
<i>Wells, Fargo-Nevada National Bank, San Francisco.</i>	
CHESTER ROWELL, M.D.	1910
<i>Fresno.</i>	
CHARLES WILLIAM SLACK, Ph.B., LL.B.	1910
<i>Kohl Building, San Francisco.</i>	
JACOB BERT REINSTEIN, M.A.	1912
<i>838 Mills Building, San Francisco.</i>	
JOHN ELIOT BUDD, A.B.	1916
<i>Stockton.</i>	

\* The term of the appointed Regents is sixteen years, and terms expire March 1.

MRS. PHOEBE APPERSON HEARST.....	1914
707 West Coast Life Building, 354 Pine street, cor. Leidesdorff street, San Francisco. Pleasanton.	
ARTHUR WILLIAM FOSTER, ESQ. ....	1916
1210 James Flood Building, San Francisco.	
GARRET WILLIAM McENERNEY, ESQ. ....	1920
1277 James Flood Building, San Francisco.	
GUY CHAFFEE EARL, A.B. ....	1918
1005 Shreve Building, San Francisco.	
JAMES WILFRED MCKINLEY, B.S. ....	1922
Rooms 432-437, Pacific Electric Building, Los Angeles.	
REV. PETER CHRISTOPHER YORKE, S.T.D. ....	1912
1267 16th avenue, Oakland.	
JOHN ALEXANDER BRITTON, ESQ. ....	1914
445 Sutter street, San Francisco.	
FREDERICK WILLIAM DOHRMANN, ESQ. ....	1920
201 Geary street, San Francisco.	
HON. THOMAS ROBERT BARD.....	1922
Hueneme.	
FRANK SPAULDING JOHNSON, ESQ. ....	1924
210 California street, San Francisco.	
WILLIAM HENRY CROCKER, Ph.B. ....	1924
Crocker National Bank, San Francisco.	

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OFFICERS OF THE REGENTS.

HIS EXCELLENCY JAMES NORRIS GILLET.....	Sacramento
President.	
VICTOR HENDRICKS HENDERSON, B.L. ....	
2434 Durant avenue, Berkeley	
Secretary and Land Agent.	
ISAIAS WILLIAM HELLMAN, Jr., Ph.B. ....	
Union Trust Company, San Francisco	
Treasurer.	
FLETCHER A. CUTLER, ESQ. ....	506 Crocker Building, San Francisco
Counsel.	

**FACULTY.**

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BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University,  
*ex officio* President of the Faculty.

ARNOLD A. D'ANCONA, A.B., M.D., Dean.

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and Oper-  
ative Surgery.

GEORGE H. POWERS, A.M., M.D., Emeritus Professor of Ophthalmology.

WILLIAM WATT KERR, A.M., M.B., C.M., Professor of Clinical Medi-  
cine.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and  
Practice of Surgery.

CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and  
Practice of Medicine.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

ALFRED B. SPALDING, A.B., M.D., Professor of Obstetrics.

SAMUEL STEEN MAXWELL, B.S., M.S., Ph.D., Associate Professor of  
Physiology.

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

T. BRAILSFORD ROBERTSON, B.S., Associate Professor of Physiological  
Chemistry.

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary  
Surgery.

WALLACE I. TERRY, B.S., M.D., Assistant Professor of Surgery.

HOWARD MORROW, M.D., Assistant Professor of Diseases of the Skin.

AUGUST J. LARTIGAU, M.D., Assistant Professor of Gynecology.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica and  
Therapeutics.

HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.  
THEODORE C. BURNETT, M.D., Instructor in Physiology.  
GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.  
SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.  
RAYMOND RUSS, B.S., M.D., Instructor in Surgery.  
TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.  
CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.  
HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.  
\*CAMILLUS BUSH, B.S., M.D., Instructor in Surgery.  
WALTER S. FRANKLIN, M.D., Instructor in Ophthalmology.  
R. LEONA ASH, B.S., M.D., Instructor in Medicine.  
WILLIAM G. MOORE, M.D., Instructor in Gynecology.  
ANTONIO M. DAL PIAZ, M.D., Instructor in Anatomy.  
RICHARD W. HARVEY, M.S., Instructor in Anatomy.  
MARGARET HENDERSON, B.S., Instructor in Bacteriology.  
ADELEBERT W. LEE, M.D., Instructor in Pathology.  
ERNEST BRYANT HOAG, B.S., A.M., M.D., Lecturer in Public Hygiene.  
HARRY P. ROBARTS, M.D., Assistant in Surgery.  
JACOB SCHWARTZ, M.D., Assistant in Surgery.  
MILTON B. LENNON, A.B., M.D., Assistant in Medicine.  
LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.  
HARRY E. ALDERSON, M.D., Assistant in Diseases of the Skin.  
WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.  
PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.  
GEORGE D. CULVER, M.D., Assistant in Diseases of the Skin.  
EDGAR W. ALEXANDER, B.S., M.D., Assistant in Ophthalmology.  
A. R. MOORE, Assistant in Physiology.  
W. F. ALLEN, B.S., Collector and Assistant in Physiology.  
DUDLEY TAIT, M.D., Assistant in Surgery.  
RENÉ BINE, M.D., Assistant in Medicine.  
JAMES LYMAN WHITNEY, M.D., Assistant in Medicine.  
MARY E. BOTSFORD, M.D., Assistant in Surgery.  
MARJORIE M. JOHNSON, B.S., Assistant in Anatomy.

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\* Died, May 28, 1910.

## **ADMISSION AND RESIDENCE.**

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### **ADMISSION.**

Applicants for admission to the first year of the medical course and applicants for advanced standing must have completed at least two full years of preliminary training in the undergraduate departments of the University of California or of a university of equal standing. As evidence of this preliminary training, they must present a Junior Certificate of this University or its equivalent. The Medical Faculty recommends that students who anticipate entering the College of Medicine acquire a reading knowledge of French and German and include among the studies leading to the Junior Certificate courses in physics, chemistry, and zoology of the scope and character of the following courses: Physics 1 and 2A; Chemistry 1, 3, 8A, 8B, and 10A; Zoology 1 and 6.

### **THE COMBINED COURSE.**

Students in the Colleges of Letters, Social Sciences, or Natural Sciences who have received the Junior Certificate and who, in addition to the work for the Junior Certificate, have completed a full year of work in the Upper Division, may, at the beginning of their fourth or Senior year in the University, register as students in the College of Medicine and, upon completion of the first year in the College of Medicine, may receive the degree of A.B., B.L., or B.S. Students who enter the College of Medicine in accordance with the foregoing provision will be expected normally to have completed 94 units of University work in the academic departments, including such work in major courses as may be acceptable to the Faculty of the college in which the student proposes to take his academic degree.

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### **ADVANCED STANDING.**

Students of recognized medical colleges are admitted to the second-, third-, and fourth-year classes only upon examination covering the subjects in which they seek to be accredited. They must first present evidence that they have satisfied the regular matriculation requirements and obtain from the Dean authorization for examination.

### LOCATION.

The work of the first and second years of the medical course is conducted at Berkeley.

The main building of the Medical Department, located at the so-called "Affiliated Colleges" in the western part of San Francisco, at Second and Parnassus avenues, south of Golden Gate Park, is devoted to the work of the third and fourth years.

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### BOARDING.

The expense of living in Berkeley and San Francisco is not great. Good board with room rent may be procured at the rate of twenty-five dollars per month at a convenient distance from the College buildings.

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### CLINICAL FACILITIES.

#### THE UNIVERSITY OF CALIFORNIA HOSPITAL.

Through contributions made by charitable persons a hospital equipment has been installed in the main building of the Medical Department at Second and Parnassus avenues, San Francisco. The hospital was opened April 11, 1907, and has been in active operation since.

On the second floor is a well-lighted operating room, with rooms annexed for anesthetizing, sterilizing, and X-ray apparatus. On this floor are two wards of sixteen beds each and one of twenty-eight beds devoted to medicine, surgery, and gynecology. On the floor above is a ward of ten beds devoted to obstetrical cases. Adjoining the ward are separate rooms for patients in the first and second stages of labor.

The hospital is designed for the care of the sick and for instruction and research in medicine. It is under the complete control of the Board of Regents of the University.

#### CITY AND COUNTY HOSPITAL OF SAN FRANCISCO.

The ward work and clinics held in the University Hospital are supplemented by similar courses given in the City and County Hospital. The medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department.

**PRESIDIO MILITARY HOSPITAL.**

Through the courtesy of the commanding officer of the medical department of the military post at the Presidio, students of the University have access to the wards of this hospital, in which they may study medical and surgical cases under the direction of the medical service of the post.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

**OUT-PATIENT DEPARTMENT.**

Instruction in ambulatory cases is given in the main building of the Medical Department in San Francisco.

**THE SAN FRANCISCO MATERNITY.**

Arrangements have been made with the Board of Directors of the San Francisco Maternity for instruction in practical obstetrics to members of the fourth-year class. Each student is detailed to the out-patient service for a period of two weeks, during which time he makes examinations of pregnant women; attends, with an interne, patients in labor and makes daily post-partum visits to the patient's home. Finally he examines women post-partum for discharge, reporting on the condition of both mother and baby. During the past year two hundred and nine patients were treated at the institution.

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**HOSPITAL APPOINTMENTS.**

The position of interne in the University of California Hospital is open each year to five members of the graduating class who recommend themselves to the Faculty by their general fitness for the appointment. Internes serve for one year and have opportunities for obtaining an invaluable experience in various fields of medicine and surgery. Internships in the City and County Hospital also are awarded to members of the graduating class upon the recommendation of the Faculty. Internships in many of the private hospitals in San Francisco are filled annually either upon the recommendation of the College of Medicine or by competitive examination.

FEES.

*First Year.*

Tuition .....	\$150.00
Dissecting material .....	10.00

The fees are payable at the time of matriculation. Students may pay one-half of the tuition fee at the beginning of each term.

A key and breakage deposit of \$25 is required for the use of lockers and to cover the cost of material used in the laboratories and damage to College buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5 a year is charged for the use of a microscope, and \$2 for an immersion lens. Each student must provide himself with a microscope.

A rental of \$2.50 is charged for the use of a set of bones and a deposit of \$7.50 as security for their return in good condition.

*Second Year.*

Tuition .....	\$150.00
Dissecting material .....	10.00
A key and breakage deposit of .....	25.00

*Third Year.*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

*Fourth Year.*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

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LIBRARY.

The library contains about 3,000 volumes, including many of the current text-books and some of the better monographs. Along certain lines the library is particularly good. It is the policy of the department to make the collections uniform and to obtain complete files of the most important periodicals published in English, French, and German. Among the journals in the library are the following:

American Journal of Medical Sciences, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anatomische Hefte, Annals of Surgery, Archiv für Anatomie und Entwicklungsgeschichte, Archiv für Entwicklungsmechanik der Or-



ganismen, Archiv für Klinische Chirurgie, Archiv für Pathologische Anatomie und Physiologie, Archives of Surgery, Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berliner Klinische Wochenschrift, Boston Medical and Surgical Journal, British Medical Journal, Centralblatt für Bakteriologie und Parasitenkunde, Centralblatt für Chirurgie, Centralblatt für Gynecologie, Centralblatt für Klinische Medizin, Congrès Français de Chirurgie, Deutsche Medizinische Wochenschrift, Ergebnisse der Anatomie und Entwicklungsgeschichte, Fortschritte der Medizin, Jahrbücher der Gesamten Medizin, Jahresbericht der Gesamten Medizin, Jahresbericht über die Fortschritte der Anatomie und Entwicklungsgeschichte, Jahresbericht über die Fortschritte der Anatomie und Physiologie, Jahresbericht über Pathogenen Mikroorganismen, Journal of the American Medical Association, Journal of Comparative Neurology, Journal of Experimental Medicine, Journal of Hygiene, Journal of Medical Research, London Lancet, Medical Record, Medical Review of Reviews, Morphologische Arbeiten, New York Medical Journal, Philadelphia Medical Journal, Revue de Chirurgie, Transactions of American Surgical Association, Verhandlungen der Deutschen Gesellschaft für Chirurgie, Wiener Medizinische Wochenschrift, Zeitschrift für Chirurgie, Zeitschrift für Morphologie und Anthropologie.

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## ORGANIZATION OF INSTRUCTION.

### SESSION OF 1910-11.

*Summary of Courses.* Instruction is divided into three classes: didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory session, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value.

This is also the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it represents a part or constitutes the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany

didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated.

Students may take advantage of the elective courses offered by the departments of Anatomy, Physiology, and Pathology. In the extension and development of the courses in medicine it is planned to introduce the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

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#### CLASS STANDING AND EXAMINATION.

For the determination of class standing and for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendation for internships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways; by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

*First Year.*—Microscopic Anatomy, chemical physiology, elementary physiology.

*Second Year.*—Systematic human anatomy, neurology, general physiology, pharmacology, morphological pathology, chemical pathology, and bacteriology.

*Third Year.*—Materia Medica, obstetrics, and general surgery.

*Fourth Year.*—Internal medicine, clinical medicine, therapeutics, general surgery, clinical surgery, gynecology, operative obstetrics, medical jurisprudence, hygiene, and three of the elective branches, one of which must be neurology, pediatrics, or dermatology.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of the departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for reexamination at the beginning of the next academic year, or be required to repeat the course. The Faculty reserves the right to sever the connection of any student with the Medical Department at any time for what it deems either mental or moral unfitness for a career in medicine.

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#### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.

3. He must have done the required work and passed the stated examinations.

4. He must have paid in full the college fees.

SCHEDULE OF STUDIES FOR THE FIRST AND  
SECOND YEARS.

	Hours per week.	Total Hours.
<i>First Year.</i>		
First Half-year.		
Osteology .....	8	128
Histology and Microscopic Anatomy .....	16	256
Physiological Chemistry .....	12	192
Second Half-year.		
Experimental Biology and General Physiology....	8	128
Physiology of Circulation, etc. ....	12	192
Anatomy .....	20	320
<i>Second Year.</i>		
First Half-year.		
Anatomy of the Nervous System .....	8	128
Physiology of the Nervous System .....	12	192
Chemical Pathology .....	8	128
Pharmacology .....	5	80
Second Half-year.		
Morphological Pathology .....	12	192
Bacteriology .....	12	192
Anatomy .....	20	320

## COURSES OF INSTRUCTION.

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### **ANATOMY.**

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

ANTONIO MINOTTI DAL PIAZ, M.D., Instructor in Anatomy.

RICHARD WARREN HARVEY, M.S., Instructor in Anatomy.

MARJORIE MAY JOHNSON, B.S., Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

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### **MICROSCOPIC ANATOMY.**

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiolog-

ical aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize himself with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding in both paraffin and celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with the laboratory drawings and contain an epitome of the student's notes and collateral reading. The drawings are made from preparations of human material wherever this is possible.

#### 1. Histology.

Dr. DAL PIAZ.

In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. This study is always comparative.

First year, 2 laboratory periods, 2 lectures a week, first half-year. 4 units.

#### 2. Microscopic Organology.

Dr. DAL PIAZ.

The organs are discussed with reference to their form, arrangement, and the number of the fundamental tissues composing them, with special reference to their structural and functional relations to other organs. In each case the student begins their study with the structures in situ, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 2 laboratory periods, 2 lectures a week, first half-year. 4 units.

## 3. Neurology.

Mr. HARVEY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with a view of tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

Second year, 2 lectures, 2 laboratory periods a week, first half-year. 4 units.

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SYSTEMATIC HUMAN ANATOMY.

The courses in systematic anatomy are given by practical work entirely. There are no lectures, and formal quizzes are given only at the completion of the dissection of a part assigned. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of the visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin-hardened sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

## 4. Osteology.

Professor MOODY and Miss JOHNSON.

Each student is loaned a skeleton and is required to model in clay each bone in the body.

First year, 2 half-days a week, first term. 2½ units.

## 5. Head and Neck.

Professor MOODY, Mr. HARVEY,  
and Miss JOHNSON.

5 half-days a week, for 8 weeks. 3¼ units.

## 6. Arm and Thorax.

Professor MOODY, Mr. HARVEY,  
and Miss JOHNSON.

5 half-days a week, for 8 weeks. 3¼ units.

## 7. Leg and Abdominal Viscera.

Professor MOODY, Mr. HARVEY,  
and Miss JOHNSON.

5 half-days a week, for 8 weeks. 3¼ units.

8. Topographical and Applied Anatomy.

Assistant Professor MOODY.

The entire body, sections of the body, muscles, and special dissections will be used in this course with the intent to enable the student to become more familiar with structural interrelations and to assemble information obtained in preceding dissections. Prerequisite: dissection of the entire body.

5 half-days a week, for 8 weeks. 3½ units.

9. Special Anatomy for Physicians and Advanced Students.

Assistant Professor MOODY.

This course consists of special dissections designed primarily for physicians and others who wish to become familiar with the anatomy of particular regions of the body, such as the eye, ear, thorax, pelvis, and abdominal viscera. The work is largely independent. A limited number of regular students will be permitted to take this course as an elective after finishing the required work of the department.

Hours arranged to suit applicants. 4-8 units.

10. Research.

Assistant Professor MOODY.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. The course also gives opportunity for those wishing to gain experience in special Histological Technique and in the construction of papers for publication. If the results obtained merit it, they will be published. To cover the cost of material expensive to obtain, chemicals, etc., a laboratory fee of \$5 will be charged. Hours optional.

11. Histological Technique.

Mr. MILLER.

This course is designed for those wishing to further familiarize themselves with the general and special methods of obtaining, fixing, embedding, sectioning, staining, and mounting material for microscopical examination. The course is optional. It cannot be substituted for work required in the College of Medicine. Laboratory fee to cover cost of reagents and material, \$10.

Hours to be arranged.

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**PHYSIOLOGY.**

SAMUEL STEEN MAXWELL, Ph.D., Associate Professor of Physiology.

T. BRAILSFORD ROBERTSON, Ph.D., D.Sc., Associate Professor of Physiological Chemistry.

THEODORE C. BURNETT, M.D., Instructor in Physiology.

W. F. ALLEN, B.S., Collector and Assistant in Physiology.

ARTHUR RUSSELL MOORE, A.B., Assistant in Physiology.

W. T. JANE, Technical Assistant.



## 1. The instruction in Physiology includes:

- (a) Systematic lectures covering the general field.
- (b) Laboratory work in which the student repeats many of the fundamental experiments and observations.
- (c) Written reports upon subjects specially assigned. In the preparation of these reports the student is expected to consult the original literature, and not to depend upon text-books and summaries.
- (d) Written tests and oral recitations. These are held at frequent intervals, with or without previous notice.

## 2. Experimental Biology and General Physiology.

Associate Professor ROBERTSON and Dr. BURNETT.

Dynamics and general theory of life-phenomena.

Lectures 2 hours, laboratory 6 hours, second half-year, Freshman year; 4 units. M F, 1-5.

## 3. Physiological Chemistry

Associate Professor ROBERTSON.

Physiology of the blood, digestion, metabolism, and animal heat.

Lectures 3 hours, laboratory 9 hours, first half-year, Freshman year; 6 units. M W F, 1-5.

## 4. Physiology of the Circulation, Respiration, Muscle, Nerve, Secretion and Reproduction.

Associate Professor MAXWELL and Dr. BURNETT.

Lectures 3 hrs, laboratory 9 hours, second half-year, Freshman year; 6 units. Tu Th S, 8-12.

## 5. Physiology of the Nervous System and Special Senses.

Associate Professor MAXWELL.

Lectures 3 hours, laboratory 9 hours, first half-year, Sophomore year; 6 units. M W F, 8-12.

## 6. Pharmacology.

Associate Professor ROBERTSON.

Lectures 2 hours, laboratory 3 hours, first half-year, Sophomore year; 3 units. Tu, 1-5; Th, 1-2.

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**PATHOLOGY.**

ADELEBERT W. LEE, M.D., Instructor in Pathology.

MARGARET HENDERSON, B.S., Instructor in Bacteriology.

Instruction in pathology is given in the Hearst Laboratory of Pathology in Berkeley during the second year, and at the University of California Hospital and the City and County Hospital in San Francisco during the fourth year.

## 1. Morphological Pathology.

The course includes instruction upon the chief organs and tissues in the order of their importance.

4 lectures, 12 hours laboratory work in a week, 18 weeks. Prerequisite: Completion of the course in first-year histology and microscopic anatomy.

2. Chemical Pathology.

In this course disease is studied from the point of view of disturbed functionation; this and the course previously detailed contrast pathological physiology with pathological anatomy.

5 lectures, 15 hours laboratory work a week, 9 weeks. Prerequisite: Completion of the first-year course in chemical physiology.

3. Bacteriology.

Miss HENDERSON.

Morphology of bacteria with particular reference to the pathogenic bacteria, parasites, and their toxins. Production of antitoxines within the body. Theories relative to the generation of antitoxines. Special attention will be given to the study of parasites, including the latest discoveries of Schaudin and Hoffman.

4. Autopsy Course.

Dr. LEE.

During the third and fourth years an autopsy course is conducted in the University of California Hospital and the City and County Hospital. The members of the class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical studies of the same students.

Two sections of 1 semester each, 4 hours a week, except in the event of absence of material. 1 unit.

*Research Department of Hearst Pathological Laboratory.*

The private laboratories of pathology are installed with equipment for original work along morphological and chemical lines. These laboratories are open to physicians and students desirous of doing research in pathology. Students are urged to undertake original work during their undergraduate years. The sole prerequisite to admission is adequate training. The laboratories are under the direction of the Professor of Pathology.

**MATERIA MEDICA.**

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica.

1. Physiological Action of Drugs.

Dr. SIMMONS.

The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.

Third year, 3 hours a week, 10 weeks.

2. Materia Medica and Pharmacy.

Dr. SIMMONS.

The course is purely practical, embracing toxicology, the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

Third year, 2 hours a week, 27 weeks.

**MEDICINE.**

WILLIAM WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and Practice of Medicine.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.

R. LEONA ASH, B.S., M.D., Instructor in Medicine.

MILTON B. LENNON, A.B., M.D., Assistant in Medicine.

WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.

PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.

RENÉ BINE, M.D., Assistant in Medicine.

JAMES LYMAN WHITNEY, M.D., Assistant in Medicine.

Work in the Department of Principles and Practice of Medicine is carried on by Professor Moffitt, Dr. Allen, Dr. Ash, Dr. Whitney, and Dr. Bine. The material of the University Hospital offers unusual advantages to students, because it is made up wholly of acute cases, and because of the opportunities of working up material in the various laboratories of the school, of following borderline cases into the surgical wards and of correlating clinical signs with autopsy findings. Didactic work has been almost wholly dropped, except in occasional reviews of important diseases that may not have presented themselves during the year.

1. Clinics in Internal Medicine.

Professor KERR.

Two hours a week throughout the year for the third and fourth years. During the coming year most attention will be given to infectious diseases and diseases of the lung and kidney. Clinical lectures, ward visits, case teaching and clinical conferences with the assistance of the hospital pathologist, Dr. Lee, will constitute the method of instruction.

2. Bedside Instruction.

Professor KERR, Dr. EBRIGHT.

One hour a week throughout the year for fourth-year students. Especial attention will be given to the circulatory, respiratory, and nervous systems, to the study of blood pressure, sphygmographic tracings, etc.

3. Physical Diagnosis.

Dr. EBRIGHT and Dr. WHITNEY.

Four hours a week throughout the year for the third-year students in the University dispensary and wards of the University Hospital. Thorough drilling of students in the taking of proper histories of patients will be insisted upon more than in the past, and prescription writing will be made a feature. Cases demanding more careful investigation are referred to the wards of the Hospital, where the students will have the opportunity of completing the out-patient examination.

Professors Kerr and Moffitt so arrange their courses of instruction that each gives special attention to different diseases in alternate years and thus between them cover the entire subject of medicine annually.

Instruction in clinical medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the methods of diagnosis, and in the rational employment of therapeutics. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and, therefore, properly requires a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the four year to place the students upon individual practical work.

1. Clinics in Internal Medicine.

Professor KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures, and demonstrations upon the material in the medical ward of the City and County Hospital and University of California Hospital. Students are assigned to the beds for study of individual cases.

3 hours a week, through 2 years.

2. Bedside Instruction.

Professor KERR, Drs. EBRIGHT, CASTELHUN, BEERMAN, and LENNON.

The class is divided into sections for ward class work. These sections consist of not more than six students and are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well equipped clinical laboratory in which the students conduct analysis of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies.

3. Physical Diagnosis.

Dr. EBRIGHT and Dr. WHITNEY.

This work is devoted to medical diagnosis and is carried on by means of work at the bedside in the wards and in the clinics. Didactic work is reduced to a minimum. As material is abundant, each student is assigned a case and is taught

methods of handling and examining patients. A suitable text-book is used as a guide and regular quizzes are held. Case records are kept throughout the year.

The first semester is devoted to thorough exercise in the elicitation of physical signs and the inculcation of the methods of examination of the cardio-vascular, lymphatic, respiratory, and the alimentary systems and the abdominal organs and the central and peripheral nervous systems. The student is made acquainted with the use of the instruments of precision, including the blood pressure apparatus, the cardio-sphygmograph, stomach tube, etc. Frequent use is also made of the ophthalmoscope and laryngoscope.

The second semester is a continuation of the work of the first, but greater attention is given to the correlation and interpretation of physical signs, the student making complete physical examination of his patients. Stress is laid upon exactness and rapidity of examination in addition to tactfulness at the bedside.

5 hours a week, both semesters.

4. Applied Therapeutics.

Dr. BEERMAN.

Dr. Beerman lectures upon therapeutics and gives demonstrations of applied therapeutics in the wards. He also, with Drs. Lennon and Castellh n, conducts the afternoon ward classes in the City and County Hospital.

5. Out-Patient Clinic on Nervous Diseases.

Dr. LENNON.

In addition to his ward work, Dr. Lennon conducts a clinic on nervous diseases at the dispensary.

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## **SURGERY.**

ROBERT A. McLEAN, M.D., Emeritus Professor of Clinical Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

WALLACE I. TERRY, M.D., Assistant Professor of Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

RAYMOND RUSS, B.S., M.D., Instructor in Surgery.

TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.

HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.

HARRY P. ROBERTS, M.D., Assistant in Surgery.

JACOB SCHWARTZ, M.D., Assistant in Surgery.

DUDLEY TAIT, M.D., Assistant in Surgery.

MARY BOTSFORD, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years, and while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. The clinical material is found in the wards of the City and County Hospital, the University of California Hospital, and the U. S. A. General Hospital at the Presidio. Cases of minor surgery are treated in the Out-Patient Dispensary. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course. Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, in which papers are read and discussed under the guidance of the professor of the principles and practice of surgery. A similar meeting is conducted for the third-year class by one of the assistants.

#### 1. General Surgery.

Professor SHERMAN.

The principles of general surgery are discussed in lectures and recitations illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

From December to April ward classes and operative clinics are added to these.

Third and fourth years, 2 hours a week, through 2 years.

#### 2. Clinical Surgery.

Professor HUNTINGTON and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the University of California Hospital and the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment and asepsis are discussed at the bedside. Special attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anaesthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings, and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

Third and fourth years, 3 hours a week, throughout the year.

## 3. Surgical Pathology.

This course will present in a practical way the application of many of those points in the previous work of pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of microorganisms by means of the lymphatics through the lungs, liver, and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked-eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic examination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical.

Third year, 12 hours a week, 9 weeks.

## 4. Operative Surgery on the Cadaver.

Dr. KUGELER.

The classical operations are performed by the students of the class individually on the cadaver, imitating as closely as possible the arrangement and technique of the operating room.

Fourth year, 2 hours a week, 9 weeks.

## 5. Wound Dressing, Minor Surgery, and Bandaging.

Dr. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

Third year, 3 hours a week, one half-year.

## 6. Ward Classes.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

Fourth year, 2 hours a week, through 1 half-year.

## 7. Surgical Dispensary.

Drs. RUSS, ROBERTS, and SCHWARTZ

This course is given upon the ambulatory material at the outpatient department, and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

Third year, 6 hours a week, 1 term.

**MICROSCOPICAL AND CHEMICAL DIAGNOSIS.**

HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology which are of assistance to the clinician in reaching a diagnosis. It aims to act as a connecting link between the work of the preclinical and the clinical years. The course is given almost exclusively by the laboratory method; short explanatory talks are given as the subject-matter demands. A simple, effective, well-lighted laboratory is provided in the University Hospital, from the wards of which much of the material is derived. The wards of the City and County Hospital and of St. Luke's Hospital are also utilized for material. Routine instruction is given on the normal and pathological conditions of the blood; particular attention being paid to accuracy in counting and to the study of the different characteristic blood diseases. If material for use is not present in the wards, specimens from the cabinet are used. An effort is made to familiarize the students thoroughly with the recognition and life history of the malarial parasite.

The examination of the urine, normal and pathological, forms an important part of the course, particular attention being paid to the microscopical examination of the sediment.

The examination of the sputum and the analysis of the gastric content are adequately considered.

Considerable time is devoted to the examination of the feces in health and disease, particularly the recognition of parasites and their ova. Through the courtesy of the officials of the Army General Hospital at the Presidio, use may be made of the abundant tropical material in that institution.

1. Microscopical and Chemical Diagnosis.

Dr. ALLEN.

Third year, 4 hours a week, throughout the term.

**CLINICAL PATHOLOGY.**

ADELEBERT W. LEE, M.D., Instructor in Pathology.

1. Autopsy Course.

The classes are divided into suitable sections and instructed at the autopsy in the technic employed in systematic necroscopy. Detailed demonstration of the autopsy findings.

Two sections of one semester each, 1 hour a week.



**2. Special Morphological Pathology.**

In this course the diseases of one or a group of organs are systematically presented from a morphological viewpoint, appropriate gross and microscopical preparations being utilized.

Two sections of one semester each, 1 hour a week.

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**OBSTETRICS.**

ALFRED BAKER SPALDING, A.B., M.D., Professor of Obstetrics.

1. Lectures 2 hours per week throughout the year. During the first half-year normal pregnancy, labor, and the puerperium will be considered. During the last half-year one-half of the abnormalities of pregnancy, labor and the puerperium, and the obstetrical operations will be discussed. Required: Juniors, entire course; Seniors, last half of year.

**2. Clinical Lecture.**

This hour will be devoted to the study of unusual obstetrical cases as they occur in the obstetrical wards, the demonstration of specimens, quizzes, and the presentation of student reports. Required of Juniors and Seniors.

1 hour per week, throughout the year.

**3. Practical Obstetrics.**

Each student of the Junior Class will devote two weeks as an assistant to the interne in the obstetrical wards, and will attend cases in confinement in the out-patient work of the San Francisco Maternity.

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**GYNECOLOGY.**

CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.

AUGUST J. LARTIGAU, M.D., Assistant Professor of Gynecology.

WILLIAM G. MOORE, M.D., Instructor in Gynecology.

Instruction in gynecology is given during the third and fourth years. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, and the purely operative specialism is given secondary consideration.

**1. Clinics in Gynecology.**

Professor VON HOFFMAN and Dr. MOORE.

This course is given upon the material in the wards of the City and County Hospital and the University of California Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take

their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room, those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

Fourth year, 2 hours a week, throughout the year.

2. Lectures in Gynecology. Professor VON HOFFMAN.

A systematic course of lectures.

Fourth year, 1 hour a week, throughout the year.

3. Demonstrations in Gynecology. Professor LARTIGAU.

A systematic course of lectures, combined with practical demonstrations illustrating the normal gross and microscopic anatomy, pathology, and symptomatology. Especial emphasis is laid upon pathological work in this course.

Third year, 1 hour a week, throughout the year.

4. Dispensary Clinics. Dr. MOORE.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

Fourth year, 18 hours for each section.

### **MEDICAL JURISPRUDENCE.**

- Lectures. Dr. D'ANCONA.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death, and the jurisprudence of insanity.

Fourth year, 1 hour a week, throughout the year.

### **HYGIENE.**

ERNEST BRYANT HOAG, B.S., A.M., M.D., Lecturer in Public Hygiene.

The principles of personal hygiene and public health. Particular attention to the early history of preventive medicine, and to the contributions to this science of Jenner, Pasteur, Lister, Koch, and others. Special topics with which every well-trained modern physician should be familiar will receive attention. These will include school hygiene and the health supervision of school children, Federal, State and Municipal hygiene. The practical relation of preventive medicine to the every-day practice of medicine will be specially emphasized.

**ELECTIVES.**

The elective clinical subjects offered in the fourth year are of two kinds: electives presenting supplementary work, and electives offering special work.

The branches which offer supplementary work are pediatrics, clinical neurology, genito-urinary surgery, and orthopedic surgery. Instruction in the general aspects of the diseases of children and of the nervous system is comprised in the work of the department of medicine. In the elective subjects of pediatrics and clinical neurology, this general work is supplemented by specialized work. Instruction in the general aspects of genito-urinary surgery and orthopedic surgery is included in the work of the department of surgery. This is supplemented by specialized work in the elective courses.

The special electives are diseases of the skin, diseases of the eye, and diseases of the ear, nose, and throat. In these courses is included the sole instruction offered in these subjects.

Students carry three electives, one of which must be pediatrics, diseases of the skin, or clinical neurology. Work in the elective branches is largely of a practical nature.

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**PEDIATRICS.**

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences, and practical work in the Out-Patient Dispensary.

1. Lectures and Recitations. Professor LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

Fourth year, 1 hour a week, throughout the year.

2. Dispensary Clinics. Dr. BLUM.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

Fourth year, 2 hours a week, throughout the year.

### DISEASES OF THE SKIN.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.  
HOWARD MORROW, M.D., Assistant Professor of Diseases of the Skin.  
LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.  
GEORGE D. CULVER, M.D., Assistant in Diseases of the Skin.  
HARRY EVERETT ALDERSON, M.D., Assistant in Diseases of the Skin.

Diseases of the Skin.                      Professors MONTGOMERY and MORROW.

1. (a) The study of the histology and histo-pathology of the skin, including biopsies, preparation and examination of sections, and demonstration of specimens. A study of the bacteriology of the various cutaneous lesions is also included.
- (b) Demonstration of clinical cases, including lectures, and recitations. Once a year students are taken to the City and County Isolation Hospital, where from fifteen to twenty lepers, and such cases of variola and varicella, as are available, are demonstrated. So far as possible the microscopic and clinical aspects are studied simultaneously.
- (c) Practical clinical work. Students are trained in methods of taking histories, of making diagnoses, and prognoses, and of treatment of dermatological patients. They are also trained in the use of radiotherapy as applied to the diseases of the skin.

2. Laboratory Diagnosis of Syphilis.                      Dr. SCHMITT.  
This includes the theory and technic of the serum diagnosis of syphilis by the Wasserman and Noguchi complement fixation reactions, and the Nonne and Noguchi butyric acid reactions, and demonstrations of the methods of finding the treponema pallida by smears, sections, and the dark-field condenser.

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### DEPARTMENT OF OPHTHALMOLOGY.

GEORGE HERMAN POWERS, A.M., M.D., Emeritus Professor of Ophthalmology.  
CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.  
W. SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.  
EDGAR W. ALEXANDER, B.S., M.D., Assistant in Ophthalmology.

Instruction in ophthalmology is given in the wards and operating rooms of the University of California Hospital and the City and County Hospital and at the Out-Patient Dispensary.

**1. Practical Work in the Physiological Laboratory.**

In the second year students are instructed in the rudiments of physiological optics, including the theory of refraction, ophthalmoscopy, skiascopy, colors, etc., and in the physiology of the eye. This course is given in the department of physiology in Berkeley.

**2. Ophthalmology.**

Drs. NAGEL and FRANKLIN.

The subjects covered in this course comprise the methods of examining the patient and the external and ophthalmoscopic diseases of the eye; ophthalmic surgery. Special study is made of the eye in its relation to general diseases. Students of the fourth year have the opportunity of continuing clinical work in ophthalmology throughout the term, and perfecting themselves in the laboratory methods of examination of eye specimens.

Fourth year, 2 hours a week, throughout the year.

**3. Ophthalmoscopy.**

Dr. BURNETT.

The third-year students are instructed in the bedside use of the ophthalmoscope, and the ocular conditions of patients in the medical wards are demonstrated.

**4. Dispensary Clinics.**

Drs. NAGEL, FRANKLIN, and ALEXANDER.

Students are afforded facilities for personal examination and treatment of ambulatory cases in the out-patient department.

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**OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.\***

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital, the University of California Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated in the clinic at the University of California Hospital and the City and County Hospital.

**1. Otology, Rhinology, and Laryngology.**

Instruction in diseases of the ear, nose, and throat is given in the wards of the City and County Hospital, the University of California Hospital, and the Out-Patient Dispensary.

Fourth year, 3 hours a week, throughout the year; 1 hour clinic, 2 hours practical work, one half-year.

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\* Staff not appointed as yet.

# DEPARTMENT OF GENITO-URINARY SURGERY.

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary Surgery.

## 1. Genito-Urinary Surgery. Professor SPENCER.

This course is entirely practical and is given in the University of California Hospital and at the Out-Patient Dispensary on ambulatory cases.

1 hour a week, throughout the year; 1 clinic a week.

# ORTHOPEDIC SURGERY.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

## 1. Orthopedic Surgery. Dr. HUNKIN.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints and the correction of special deformities are considered. Special attention is paid to the making of splints and the application and fitting of braces.

Fourth year, 2 hours a week, throughout the year.

# GRADUATES, 1910.

Marian Osgood Hooker .....	Los Angeles
Henry Wilbur Irwin, B.S. ....	Berkeley
Seely Frederick Long, Jr., B.S. ....	San Francisco
Chester Biven Moore, B.S. ....	San Jose

# MATRICULATES, 1909-10.

## *Fourth-Year Class.*

Marian Osgood Hooker .....	Los Angeles
Seely Frederick Long, Jr., B.S. ....	San Francisco

## *Third-Year Class.*

Walter Isaac Baldwin, B.S. ....	Eureka
Elbridge John Best, B.S. ....	Grass Valley
Lloyd Bryan .....	Pepperwood
Henry Chesley Bush .....	San Francisco
William Howard Campbell, B.S. ....	Berkeley
Kate Rawlinson Gompertz, B.S. ....	Berkeley
Howard Hill Markel, A.B. ....	Davis, Illinois
Clifford Black Walker, B.S. ....	South Pasadena
Augusta Zuber, B.S. ....	Los Angeles

*Second-Year Class.*

Samuel Ellsworth Bailey, B.S. ....	Redding
Ernest Winton Cleary, B.S. ....	Lindsay
Linwood Dozier .....	Oakland
Margaret Henderson, B.S. ....	Berkeley
Carl Leslie Hoag, B.S. ....	Boonville
Milan Edward Hunt .....	Oakland
Marjorie May Johnson .....	National City
Frank Lewis Kelley, B.S. ....	Oakland
Bess Grace Lewis, B.S. ....	Los Gatos
Herbert Everett Long .....	San Francisco
Ann Louise Martin, B.S. ....	Stockton
Dewey Robert Powell, B.S. ....	Berkeley
Allan Raymond Powers, B.S., M.F. ....	San Francisco
Lionell David Prince .....	San Francisco
Ruth Charlotte Risdon .....	Berkeley
Clifford Daniel Sweet .....	Berkeley

*First-Year Class.*

Warren Barrett Allen .....	Berkeley
Daniel Irwin Aller, A.B. ....	Forest Grove, Oregon
Edward Cline Bull .....	Berkeley
Joseph Henry Catton .....	Berkeley
Gordon Adams Clapp, A.B. ....	Forest Grove, Oregon
Montague Cleaves .....	London, England
Alma Locke Cooke .....	Oakland
Earl Hamilton Cornell .....	Oakland
Ruby Lacey Cunningham, B.S. ....	Riverside
Howard Henry Dignan .....	Santa Rosa
Henry Ehlers .....	San Francisco
William Robert Hume .....	Oakland
Vladimir Victor Ligda B.S. ....	Oakland
Selby Harold Marks .....	Ukiah
Henry George Mehrkens .....	Berkeley
Hugh Elmer Penland, B.S. ....	Berkeley
Oswald Hope Robertson .....	Berkeley
Charles Lee Tranter .....	Carson City, Nevada
Charles Ernest von Geldern .....	San Francisco
Josiah Howe White .....	Alameda
Alexander Hamilton Williamson .....	Pasadena

UNIVERSITY OF CALIFORNIA

COLLEGE OF MEDICINE

ANNOUNCEMENT FOR 1911-12

BERKELEY  
THE UNIVERSITY PRESS

1911





## CALENDAR.

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### 1911.

August 1.—Undergraduate applications for admission to the Academic and Medical Departments, with credentials, should be filed with the Recorder of the Faculties at Berkeley on or before August 1. This may be done by mail.

August 10.—Academic year begins.

August 10-15.—Entrance examinations at Berkeley for Freshman standing in the Academic Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before Wednesday, August 9. But applications for permits to be sent by mail should be made as far in advance of August 9 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

August 18, 19, 21, 9 a.m. to 12 m.—Office hours of the Dean at California Hall, Berkeley. Registration of first-year and second-year students in the Dean's office, California Hall.

August 19-21, 2-4 p.m.—Registration of students of the third-year and fourth-year classes in the Dean's office in the main building of the Medical Department in San Francisco.

August 22.—Class work begins.

September 9.—Admission Day: a holiday.

November 30-December 2.—Thanksgiving Recess.

December 24.—Christmas vacation begins.

### 1912.

January 8.—Second half-year begins.

February 22.—Washington's Birthday: a holiday.

March 23.—Charter Day: a holiday.

May 6.—Examinations begin.

May 15.—Commencement Day.

## REGENTS OF THE UNIVERSITY.

NOTE.—The regular meetings of the Regents are held at 2 p.m. on the second Tuesday of each month, except July, and on the day before Commencement, at 618 Crocker bldg., San Francisco.

### REGENTS EX OFFICIO.

HIS EXCELLENCY HIRAM WARREN JOHNSON.....	Sacramento
<i>Governor and President of the Regents ex officio.</i>	
HIS HONOR ALBERT J. WALLACE.....	421 Laughlin bldg., Los Angeles
<i>Lieutenant-Governor.</i>	
HON. ARTHUR H. HEWITT.....	Yuba City
<i>Speaker of the Assembly.</i>	
HON. EDWARD HYATT.....	Sacramento
<i>State Superintendent of Public Instruction.</i>	
HON. A. LOWNDES SCOTT.....	San Francisco
Pacific Hardware and Steel Company, Seventh and Townsend sts. <i>President of the State Agricultural Society.</i>	
RUDOLPH JULIUS TAUSSIG, Esq.....	Main and Mission sts., San Francisco
<i>President of the Mechanics' Institute.</i>	
BENJ. IDE WHEELER, Ph.D., LL.D.....	California Hall, Berkeley
<i>President of the University.</i>	

### APPOINTED REGENTS.

The term of the appointed Regents is sixteen years and terms expire March 1, of the year indicated. The names are arranged in the order of original accession to the Board.

ISAIAS WILLIAM HELLMAN, Esq.....	1918
Wells, Fargo-Nevada National Bank, San Francisco.	
CHESTER ROWELL, M.D.....	1927
Fresno.	
JOHN ELIOT BUDD, A.B.....	1916
Stockton.	

MRS. PHOEBE APPERSON HEARST.....	1914
Pleasanton.	
Business address: 354 Pine st., San Francisco.	
ARTHUR WILLIAM FOSTER, Esq.....	1916
1210 James Flood bldg., San Francisco.	
GARRETT WILLIAM MCENERNEY, Esq.....	1920
1277 James Flood bldg., San Francisco.	
GUY CHAFFEE EARL, A.B.....	1918
1005 Shreve bldg., San Francisco.	
JAMES WILFRED MCKINLEY, B.S.....	1922
Rooms 432-437, Pacific Electric bldg., Los Angeles.	
REV. PETER CHRISTOPHER YORKE, S.T.D.....	1912
1267 Sixteenth av., Oakland.	
JOHN ALEXANDER BRITTON, Esq.....	1914
455 Sutter st., San Francisco.	
FREDERICK WILLIAM DOHRMANN, Esq.....	1920
201 Geary st., San Francisco.	
*FRANK SPAULDING JOHNSON, Esq.....	1924
210 California st., San Francisco.	
WILLIAM HENRY CROCKER, Ph.B.....	1924
Crocker National Bank, San Francisco.	
TRUXTON BEALE, LL.B.....	1927
Pacific Union Club, San Francisco.	
CHARLES STETSON WHEELER, B.L.....	1912
Nevada Bank bldg., San Francisco.	
PHILIP ERNEST BOWLES, Ph.B.....	1922
427 California st., San Francisco.	

## OFFICERS OF THE REGENTS.

HIS EXCELLENCY HIRAM WARREN JOHNSON.....	Sacramento
<i>President.</i>	
VICTOR HENDRICKS HENDERSON, B.L.....	220 California Hall, Berkeley
<i>Secretary and Land Agent.</i>	
ISAIAH WILLIAM HELLMAN, JR., Ph.B.....	Union Trust Company, San Francisco
<i>Treasurer.</i>	

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\* Died June 22, 1911.

**FACULTY.**

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BENJAMIN IDE WHEELER, LL.D., Ph. D., President of the University, *ex officio* President of the Faculty.

ARNOLD A. D'ANCONA, A.B., M.D., Dean.

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and Operative Surgery.

GEORGE H. POWERS, A.M., M.D., Emeritus Professor of Ophthalmology.

WILLIAM WATT KERR, A.M., M.B., C.M., Professor of Clinical Medicine.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.

CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.

HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and Practice of Medicine.

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

ALFRED B. SPALDING, A.B., M.D., Professor of Obstetrics.

FREDERICK P. GAY, A.B., M.D., Professor of Pathology.

SAMUEL STEEN MAXWELL, B.S., M.S., Ph.D., Associate Professor of Physiology.

T. BRAINSFORD ROBERTSON, B.S., Associate Professor of Physiological Chemistry.

JOHN G. FITZ-GERALD, M.B., Associate Professor of Bacteriology.

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary Surgery.

WALLACE I. TERRY, B.S., M.D., Assistant Professor of Surgery.

HOWARD MORROW, M.D., Assistant Professor of Diseases of the Skin.

AUGUST J. LARTIGAU, M.D., Assistant Professor of Gynecology.

GLANVILLE Y. RUSK, A.B., M.D., Assistant Professor of Pathology.

ARTHUR RUSSELL MOORE, Ph.D., Assistant Professor of Physiology.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica and Therapeutics.

HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.

- HAROLD BRUNN, M.D., Instructor in Surgery.  
THEODORE C. BURNETT, M.D., Instructor in Physiology.  
GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
PHILIP KING BROWN, A.B., M.D., Instructor in Clinical Pathology.  
SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.  
RAYMOND RUSS, B.S., M.D., Instructor in Surgery.  
TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.  
CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.  
HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.  
WALTER SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.  
R. LEONA ASH, B.S., M.D., Instructor in Medicine.  
WILLIAM G. MOORE, M.D., Instructor in Gynecology.  
ANTONIO M. DAL PIAZ, M.D., Instructor in Anatomy.  
RICHARD W. HARVEY, M.S., Instructor in Anatomy.  
ADELHEBERT W. LEE, M.D., Instructor in Pathology.  
ALBERT J. HOUSTON, B.L., M.D., Instructor in Diseases of the Ear, Nose,  
and Throat.  
ERNEST BRYANT HOAG, B.S., A.M., M.D., Lecturer in Public Hygiene.  
HARRY P. ROBERTS, M.D., Assistant in Surgery.  
JACOB SCHWARTZ, M.D., Assistant in Surgery.  
MILTON B. LENNON, A.B., M.D., Assistant in Medicine.  
LUCIEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.  
HARRY E. AIDERSON, M.D., Assistant in Diseases of the Skin.  
WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.  
PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.  
GEORGE D. CULVER, M.D., Assistant in Diseases of the Skin.  
EDGAR W. ALEXANDER, B.S., M.D., Assistant in Ophthalmology.  
W. F. ALLEN, B.S., Collector and Assistant in Physiology.  
DUDLEY TAIT, M.D., Assistant in Surgery.  
RENÉ BINE, M.D., Assistant in Medicine.  
JAMES LYMAN WHITNEY, M.D., Assistant in Medicine.  
MARY E. BOTSFORD, M.D., Assistant in Surgery.  
BENJAMIN THOMAS, M.D., Assistant in Diseases of the Ear, Nose, and  
Throat.  
CARL C. CRANE, M.D., Assistant in Orthopedic Surgery.  
RUBY LACY CUNNINGHAM, B.S., Assistant in Anatomy.  
IVAN C. HALL, A.B., M.S., Assistant in Bacteriology.

## ADMISSION AND RESIDENCE.

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### ADMISSION.

Applicants for admission to the first year of the medical course and applicants for advanced standing must have completed at least two full years of preliminary training in the undergraduate departments of the University of California or of a university of equal standing. As evidence of this preliminary training, they must present a Junior Certificate of this University or its equivalent. The Medical Faculty recommends that students who anticipate entering the College of Medicine acquire a reading knowledge of French and German and include among the studies leading to the Junior Certificate courses in physics, chemistry, and zoology of the scope and character of the following courses: Physics 2A and 2B; Chemistry 1, 3, 8A, 8B, and 110A; Zoology 1 and 106.

### THE COMBINED COURSE.

Students in the Colleges of Letters, Social Sciences, or Natural Sciences who have received the Junior Certificate and who, in addition to the work of the Junior Certificate, have completed a full year of work in the Upper Division, may, at the beginning of their fourth or senior year in the University, register as students in the College of Medicine and, upon completion of the first year in the College of Medicine, may receive the degree of A.B., B.L., or B.S. Students who enter the College of Medicine in accordance with the foregoing provision will be expected normally to have completed 94 units of University work in the academic departments, including such work in major courses as may be acceptable to the faculty of the college in which the student proposes to take his academic degree.

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### ADVANCED STANDING.

Students of recognized medical colleges are admitted to the second-year, third-year and fourth-year classes only upon examination covering the subjects in which they seek to be accredited. They must first present evidence that they have satisfied the regular matriculation requirements and obtain from the Dean authorization for examination.

#### LOCATION.

The work of the first and second years of the medical course is conducted at Berkeley.

The main building of the Medical Department, located at the so-called "Affiliated Colleges" in the western part of San Francisco, at Second and Parnassus avenues, south of Golden Gate Park, is devoted to the work of the third and fourth years.

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#### BOARDING.

The expense of living in Berkeley and San Francisco is not great. Good board with room may be procured at the rate of twenty-five dollars per month at a convenient distance from the College buildings.

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#### CLINICAL FACILITIES.

##### THE UNIVERSITY OF CALIFORNIA HOSPITAL.

Through contributions made by charitable persons a hospital equipment has been installed in the main building of the Medical Department at Second and Parnassus avenues, San Francisco. The hospital was opened April 11, 1907, and has been in active operation since.

On the second floor is a well-lighted operating room, with rooms annexed for anesthetizing, sterilizing, and X-ray apparatus. On this floor are two wards of sixteen beds each and one of twenty-eight beds devoted to medicine, surgery, and gynecology. On the floor above is a ward of ten beds devoted to obstetrical cases. Adjoining the ward are separate rooms for patients in the first and second stages of labor.

The hospital is designed for the care of the sick and for instruction and research in medicine. It is under the complete control of the Board of Regents of the University.

##### CITY AND COUNTY HOSPITAL OF SAN FRANCISCO.

The ward work and clinics held in the University Hospital are supplemented by similar courses given in the City and County Hospital. The medical schools in San Francisco are given practical control of the clinical material in the hospital, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department.

##### PRESIDIO MILITARY HOSPITAL.

Through the courtesy of the commanding officer of the medical department of the military post at the Presidio, students of the University



have access to the wards of this hospital, in which they may study medical and surgical cases under the direction of the medical service of the post.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

#### OUT-PATIENT DEPARTMENT.

Instruction in ambulatory cases is given in the main building of the Medical Department in San Francisco.

#### THE SAN FRANCISCO MATERNITY.

Arrangements have been made with the Board of Directors of the San Francisco Maternity for instruction in practical obstetrics to members of the fourth-year class. Each student is detailed to the out-patient service for a period of two weeks, during which time he makes examinations of pregnant women; attends, with an interne, patients in labor and makes daily post-partum visits to the patient's home. Finally he examines women post-partum for discharge, reporting on the condition of both mother and baby. During the past year two hundred and twenty patients were treated at the institution.

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#### HOSPITAL APPOINTMENTS.

The position of interne in the University of California Hospital is open each year to five members of the graduating class who recommend themselves to the Faculty by their general fitness for the appointment. Internes serve for one year and have opportunities for obtaining experience in various fields of medicine and surgery. Internships in the City and County Hospital also are awarded to two members of the graduating class upon the recommendation of the Faculty. Internships in some of the private hospitals in San Francisco are filled annually either upon the recommendation of the College of Medicine or by competitive examination.

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#### FEES.

##### *First Year.*

Tuition .....	\$150.00
Dissecting material .....	10.00

The fees are payable at the time of matriculation. Students may pay one-half of the tuition fee at the beginning of each term.

A key and breakage deposit of \$25 is required for the use of lockers and to cover the cost of material used in the laboratories and damage to College buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5 a year is charged for the use of a microscope, and \$2 for an immersion lens. Each student must provide himself with a microscope.

A rental of \$2.50 is charged for the use of a set of bones and a deposit of \$7.50 as security for their return in good condition.

#### *Second Year.*

Tuition .....	\$150.00
Dissecting material .....	10.00
A key and breakage deposit of .....	25.00

#### *Third Year.*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

#### *Fourth Year.*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

### LIBRARY.

The library contains about 3,000 volumes, including many of the current text-books and some of the better monographs. Along certain lines the library is particularly good. It is the policy of the department to make the collections uniform and to obtain complete files of the most important periodicals published in English, French, and German. Among the journals in the library are the following:

American Journal of Medical Science, American Journal of Obstetrics, American Medicine, Anatomischer Anzeiger, Anatomische Hefte, Annals of Surgery, Archiv für Anatomie und Entwicklungsgeschichte, Archiv für Entwicklungsmechanik der Organismen, Archiv für Klinische Chirurgie, Archiv für Pathologische Anatomie und Physiologie, Archives of Surgery, Arbeiten aus dem Kaiserlichen Gesundheitsamte, Berliner Klinische Wochenschrift, Boston Medical and Surgical Journal, British Medical Journal, Centralblatt für Bakteriologie und Parasitenkunde, Centralblatt für Chirurgie, Centralblatt für Gynecologie, Centralblatt für Klinische Medizin, Congrès Français de Chirurgie, Deutsche Medicinische Wochenschrift, Ergebnisse der Anatomie und Entwicklungsgeschichte, Fortschritte der Medicin, Jahrbücher der Gesamten Medicin, Jahresbericht der Gesamten Medicin, Jahresbericht über die Fortschritte der

Anatomie und Entwicklungsgeschichte, Jahresbericht über die Fortschritte der Anatomie und Physiologie, Jahresbericht über Pathogenen Mikroorganismen, Journal of the American Medical Association, Journal of Comparative Neurology, Journal of Experimental Medicine, Journal of Hygiene, Journal of Medical Research, London Lancet, Medical Record, Medical Review of Reviews, Morphologische Arbeiten, New York Medical Journal, Philadelphia Medical Journal, Revue de Chirurgie, Transactions of American Surgical Association, Verhandlungen der Deutschen Gesellschaft für Chirurgie, Wiener Medizinische Wochenschrift, Zeitschrift für Chirurgie, Zeitschrift für Morphologie und Anthropologie.

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## ORGANIZATION OF INSTRUCTION.

### SESSION OF 1911-12.

*Summary of Courses.* Instruction is divided into three classes: didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory session, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value.

This is also the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it is a part or the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated.

Students may take advantage of the elective courses offered by the departments of Anatomy, Physiology, and Pathology. In the extension and development of the courses in medicine it is planned to introduce

the elective system into the clinical as well as the preclinical years, and to allow the student throughout his course the right to elect a large percentage of his work. Instruction extends through thirty-six weeks.

#### CLASS STANDING AND EXAMINATION.

For the determination of class standing and for advancement and graduation the results and markings of all studies and examinations consist of "Passed with Honor," "Passed," and "Not Passed." The value of the markings "Passed with Honor" is expressed in honor units, which correspond to the unit value of the particular course; the sum total of the honor units determines the class standing of honor students, and upon such class standing are based the recommendations for internships.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations. The grading of students upon the basis of a written examination alone is not practiced.

At the close of each academic year the following examinations are held:

*First Year.*—Microscopic anatomy, chemical physiology, elementary physiology.

*Second Year.*—Systematic human anatomy, neurology, general physiology, pharmacology, morphological pathology, chemical pathology, and bacteriology.

*Third Year.*—Materia medica, microscopical and chemical diagnosis, clinical pathology, obstetrics, general surgery.

*Fourth Year.*—Internal medicine, clinical medicine, therapeutics, general surgery, clinical surgery, gynecology, operative obstetrics, medical jurisprudence, hygiene, pediatrics, diseases of the skin, diseases of the eye, diseases of the ear, nose and throat, genito-urinary surgery, orthopedic surgery.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening

of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of the departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for reexamination at the beginning of the next academic year, or be required to repeat the course. The Faculty reserves the right to sever the connection of any student with the Medical Department at any time for what it deems either mental or moral unfitness for a career in medicine.

#### REQUIREMENTS FOR GRADUATION.

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.
3. He must have done the required work and passed the stated examinations.
4. He must have paid in full the college fees.

#### SCHEDULE OF STUDIES.

##### *First Year.*

	Hours per week	Total Hours
First Half-year.		
Osteology .....	8	128
Histology and Microscopic Anatomy .....	16	256
Physiological Chemistry .....	12	192
Second Half-year.		
Experimental Biology and General Physiology.....	8	128
Physiology of Circulation, etc. ....	12	192
Anatomy .....	20	320

*Second Year.*

	Hours per week	Total Hours
First Half-year.		
Anatomy of the Nervous System .....	8	128
Physiology of the Nervous System .....	12	192
Chemical Pathology .....	8	128
Pharmacology .....	5	80
Second Half-year.		
Morphological Pathology .....	12	192
Bacteriology .....	12	192
Anatomy .....	20	320

*Third Year.*

Materia Medica and Pharmacology .....	74
Clinical Pathology .....	68
General Medicine, including Clinical Microscopy .....	552
General Surgery .....	270
Gynecology .....	36
Ophthalmoscropy .....	36
Obstetrics .....	108

*Fourth Year.*

General Medicine .....	418
Pediatrics .....	136
Jurisprudence .....	34
Diseases of the Skin .....	68
General Surgery .....	238
Orthopedic Surgery .....	68
Genito-Urinary Diseases .....	68
Diseases of the Eye .....	68
Diseases of the Ear, Nose, and Throat .....	68
Obstetrics .....	34
Gynecology .....	102
Hygiene .....	34

**Anatomy.**

\*ROBERT O. MOODY, M.D., Assistant Professor of Anatomy.

ANTONIO M. DAL PIAZ, M.D., Instructor in Anatomy.

RICHARD W. HARVEY, M.S., Instructor in Anatomy.

RUBY L. CUNNINGHAM, B.S., Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corruptions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

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#### MICROSCOPIC ANATOMY.

The various tissues and organs of the body are studied from the development point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly con-

\* Absent on leave, first half-year, 1911-12.

sidered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. In order to familiarize himself with the details of histological technique, each member of the class must present during the year acceptable preparations of different organs made by various methods. This includes the process of fixation, embedding in both paraffin and

celloidin, and staining by the common methods. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with the laboratory drawings and contain an epitome of the student's notes and collateral reading. The drawings are made from preparations of human material wherever this is possible.

## 101. Histology.

Dr. DAL PIAZ.

In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. This study is always comparative.

First year, 2 laboratory periods, 2 lectures a week, first half-year.  
4 units.

## 102. Microscopic Organology.

Dr. DAL PIAZ.

The organs are discussed with reference to their form, arrangement, and the number of the fundamental tissues composing them, with special reference to their structural and functional relations to other organs. In each case the student begins their study with the structures *in situ*, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 2 laboratory periods, 2 lectures a week, first half-year.  
4 units.

## 103. Neurology.

Mr. HARVEY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with a view of tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

Second year, 2 lectures, 2 laboratory periods a week, first half-year.  
4 units.

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SYSTEMATIC HUMAN ANATOMY.

The courses in systematic anatomy are given by practical work entirely. There are no lectures, and formal quizzes are given only at the completion of the dissection of a part assigned. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of the visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures



as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin-hardened sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

## 104. Osteology.

Dr. DAL PIAZ and Miss CUNNINGHAM.

Each student is loaned a skeleton and is required to model representatives of each type of bones and to become familiar with the detailed characters and differential peculiarities of each bone in the body.

First year, first half-year. M Tu Th F, 1-5, first 8 weeks.  $2\frac{3}{4}$  units.

## 105. Head and Neck.

Assistant Professor MOODY, Dr. DAL PIAZ, Mr. HARVEY and Miss CUNNINGHAM.

First half-year, first 8 weeks for second-year students only, M W F, 1-5; Tu Th, 8-12; second 8 weeks for first-year students, M Tu W Th F, 1-5. Second half-year, 16 weeks, M Tu W Th F, 8-12.  $3\frac{1}{2}$  units.

## 106. Arm and Thorax.

Assistant Professor MOODY, Dr. DAL PIAZ, Mr. HARVEY and Miss CUNNINGHAM.

First half-year, first 8 weeks for second-year students only, M W F, 1-5; Tu Th, 8-12; second 8 weeks for first-year students, M Tu W Th F, 1-5. Second half-year, 16 weeks, M Tu W Th F, 8-12.  $3\frac{1}{2}$  units.

## 107. Leg and Abdomen.

Assistant Professor MOODY, Dr. DAL PIAZ, Mr. HARVEY and Miss CUNNINGHAM.

First half-year, first 8 weeks for second-year students only, M W F, 1-5; Tu Th, 8-12; second 8 weeks for first-year students, M Tu W Th F, 1-5. Second half-year, 16 weeks, M Tu W Th F, 8-12.  $3\frac{1}{2}$  units.

## 108. Regional and Topographical Anatomy and Normal Physical Diagnosis.

Assistant Professor MOODY.

## Second half-year.

Living models, special dissections and sections of the body are used in this course to enable the student to become more familiar with structural relations and to assemble information obtained in preceding dissections. The normal heart and lung sounds and the mapping out of organs by percussion are studied on the living models.  $2\frac{3}{4}$  units. W F 8-12.

Prerequisite: courses 105, 106, and 107.

109. Special Anatomy for Physicians and Advanced Students.  
Assistant Professor MOODY.  
Hours arranged to suit applicants.

210. Research. Assistant Professor MOODY.  
Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. The course also gives opportunity for those wishing to gain experience in special Histological Technique and in the construction of papers for publication. If the results obtained merit it, they will be published. To cover the cost of material expensive to obtain, chemicals, etc., a laboratory fee of \$5 will be charged. Hours optional.

2. Histological Technique. Mr. MILLER.  
Designed for those wishing to further familiarize themselves with the general and special methods of obtaining, fixing, embedding, sectioning, staining, and mounting material for microscopical examination. The course is optional. It cannot be substituted for work required in the Medical Department. Hours to be arranged. Laboratory fee to cover cost of material, \$10.

### PHYSIOLOGY.

- SAMUEL STEEN MAXWELL, Ph.D., Associate Professor of Physiology.  
T. BRAILSFORD ROBERTSON, Ph.D., D.Sc., Associate Professor of Physiological Chemistry.  
THEODORE C. BURNETT, M.D., Instructor in Physiology.  
ARTHUR RUSSELL MOORE, Ph.D., Assistant Professor of Physiology.  
L. R. BEAUCHAMP, Technical Assistant.  
C. B. BENNETT, A.B., Assistant in Physiological Chemistry.

1. The instruction in Physiology includes:  
(a) Systematic lectures covering the general field.  
(b) Laboratory work in which the student repeats many of the fundamental experiments and observations.  
(c) Written reports upon subjects specially assigned. In the preparation of these reports the student is expected to consult the original literature, and not to depend upon text-books and summaries.  
(d) Written tests and oral recitations. These are held at frequent intervals, with or without previous notice.

2. Experimental Biology and General Physiology.  
Associate Professor ROBERTSON and Dr. BURNETT.

Dynamics and general theory of life-phenomena.

Lectures 2 hours, laboratory 6 hours, second half-year. Freshman year; 4 units, M F 1-5.

3. *Physiological Chemistry*. Associate Professor ROBERTSON.  
 Physiology of the blood, digestion, metabolism, and animal heat. Lectures 3 hours, laboratory 9 hours, first half-year, Freshman year; 6 units. M W F, 1-5.
4. *Physiology of the Circulation, Respiration, Muscles, Nerve, Secretion and Reproduction.*  
 Associate Professor MAXWELL and Dr. BURNETT.  
 Lectures 3 hours, laboratory 9 hours, second half-year, Freshman year; 6 units. Tu Th S, 8-12.
5. *Physiology of the Nervous System and Special Senses.*  
 Associate Professor MAXWELL and Dr. BURNETT.  
 Lectures 3 hours, laboratory 9 hours, first half-year, Sophomore year; 6 units, M W F, 8-12.
6. *Pharmacology.* Associate Professor ROBERTSON.  
 Lectures 2 hours, laboratory 3 hours, first half-year, Sophomore year; 3 units. Tu, 1-5; Th, 1-2.

### **PATHOLOGY AND BACTERIOLOGY.**

FREDERICK P. GAY, A.B., M.D., Professor of Pathology.  
 JOHN G. FITZ-GERAID, M.B., Associate Professor of Bacteriology.  
 GLANVILLE Y. RUSK, A.B., M.D., Assistant Professor of Pathology.  
 ADELBERT W. LEE, M.D., Instructor in Pathology.  
 IVAN C. HALL, A.B., M.S., Assistant in Bacteriology.

Instruction in Pathology and Bacteriology is given in the Hearst Laboratory of Pathology in Berkeley during the second year and at the University of California Hospital and the City and County Hospital in San Francisco during the third and fourth years.

The course in Pathology aims to outline the natural history of disease. The instruction is for convenience divided into three correlated courses dealing respectively with causation, progress and effect.

#### **101. Bacteriology and Protozoology.**

Associate Professor FITZ-GERAID and Mr. HALL.  
 Bacteriological methods are first taught; the preparation of culture media, the isolation of bacteria in pure culture, and the morphology and cultural characteristics of bacterial species. The pathogenic bacteria are then taken up in relation to specific diseases. The lower animal parasites concerned in systemic diseases are then considered. Lectures are employed for outlining general principles, the work being largely practical.

Second half-year; 8 hours. 3 units.

#### **102. Infection and Immunity.**

Professor GAY.

The course presents the most accessible aspects of functional pathology. It traces the evolution of infectious diseases in the

body and the mechanism of animal defense. Experimental methods of studying infection are demonstrated and so far as practicable carried out by the student. A systematic course of lectures will outline the principles of Immunology with a consideration of their applicability in the diagnosis and treatment of disease. These lectures may be taken by non-medical students without laboratory work.

Second half-year; 8 hours; 3 units. Lecture course, 2 hours; 2 units.

103. Morbid Anatomy and Histopathology. Assistant Professor RUSK.

The organ and tissue changes in disease in the animal and particularly in the human body will be studied in this course. Macroscopic lesions will be illustrated by fresh material from autopsies, museum specimens and lantern demonstrations, and the microscopic appearances will be studied by means of a loan collection of prepared slides. Experimental lesions are used to emphasize the evolution of such processes. This course, whereas largely practical, is considered systematically in lectures and conferences.

Second half-year; 16 hours; 6 units.

104. Autopsy Course.

Dr. LEE.

During the third and fourth years an autopsy course is conducted in the University of California Hospital and the City and County Hospital. The members of the class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical study by the same students.

### GRADUATE COURSES.

201. Research.

Professor GAY.

Problems of Infection and Immunity.

Either half-year. Hours and units to be arranged.

202. Research. Neuropathology.

Assistant Professor RUSK.

Either half-year. Hours and units to be arranged.

### MATERIA MEDICA.

HAYDN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica.

1. Physiological Action of Drugs.

Dr. SIMMONS.

The action and application of the chief remedial agents are considered. Lectures, demonstrations, and recitations.

Third year. 3 hours a week, 10 weeks.

2. Materia Medica and Pharmacy.

Dr. SIMMONS.

The course is purely practical, embracing toxicology, the compounding of prescriptions, instruction in incompatibilities, and the general regulations for the safe and efficient employment of remedial measures.

Third year. 2 hours a week, 27 weeks.

**MEDICINE.**

WILLIAM WATT KERR, M.A., M.B., C.M., Professor of Clinical Medicine.  
 HERBERT C. MOFFITT, B.S., M.D., Professor of the Principles and Practice of Medicine.  
 GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
 R. LEONA ASH, M.D., Instructor in Medicine.  
 MILTON B. LENNON, A.B., M.D., Assistant in Medicine.  
 WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.  
 PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.  
 RENÉ BINE, M.D., Assistant in Medicine.  
 JAMES LYMAN WHITNEY, M.D., Assistant in Medicine.

Work in the Department of Principles and Practice of Medicine is carried on by Professor Moffitt, Dr. Allen, Dr. Ash, Dr. Whitney, and Dr. Bine. The material of the University Hospital offers unusual advantages to students, because it is made up wholly of acute cases, and because of the opportunities of working up material in the various laboratories of the school, of following borderline cases into the surgical wards and of correlating clinical signs with autopsy findings. Didactic work has been almost wholly dropped, except in occasional reviews of important diseases that may not have presented themselves during the year.

Professors Kerr and Moffitt so arrange their courses of instruction that each gives special attention to different diseases in alternate years and thus between them cover the entire subject of medicine annually.

Instruction in clinical medicine is founded upon practical work based upon the available clinical material. Direct contact with disease in its varied manifestations can alone train the student in the accurate observation of sickness, in the judicious application of the methods of diagnosis, and in the rational employment of therapeutics. The material in internal medicine at the disposal of the staff of instructors and students is large in quantity and rich in quality. General medical work constitutes the greater bulk of the work of physicians, and, therefore, properly requires a large portion of the time of the student. The general plan of the department is to ground the students in the fundamentals of medicine during the third year, and during the four years to place the students upon individual practical work.

#### 1. Clinics in Internal Medicine.

Professor KERR.

This course continues through the third and fourth years. It consists of clinics, clinical conferences, lectures, and demonstrations upon the material in the medical wards of the City and County Hospital

and University of California Hospital. Students are assigned to the beds for study of individual cases.

3 hours a week, third and fourth years.

## 2. Bedside Instruction.

Professor KERR, Drs. EBRIGHT, CASTELHUN, BEERMAN, and LENNON.

The class is divided into sections for ward class work. These sections consist of not more than six students who are assigned to the wards twice weekly. In the wards they are taught the proper taking of histories and the recording of medical phenomena, learn the physical and other signs of disease, and follow the progress of diseases. Through their regular attendance, the students are enabled to follow closely the therapeutic treatment. In connection with the ward work there is a well equipped clinical laboratory in which the students conduct analyses of the blood, gastric contents, urine, and do such other laboratory work as may arise in connection with the ward studies.

## 3. Clinics in Medicine.

Dr. MOFFITT.

Beginning with the next year year a different method of instruction will be followed in the University Hospital. The third year students who have had no previous training in physical diagnosis will, during the first semester, give their entire time in medicine to this subject. Sections will be taken in the wards and the out-patient department by Dr. Ash, Dr. Bine, and Dr. Whitney. Clinical lectures will not begin until the second semester.

During the first half of the senior year two hours a week will be devoted to clinical lectures and a two-hour period to a clinical conference. Case teaching and reports based upon library work will occupy a portion of this time, cases seen in the wards will be reviewed and, when possible, the results of post-mortem examinations will be compared with the clinical findings.

In the second semester senior students will enter the wards as clinical clerks and will be held responsible for the proper investigation of cases assigned them.

## 4. Physical Diagnosis.

Dr. EBRIGHT and Dr. WHITNEY.

This work is devoted to medical diagnosis and is carried on by means of work at the bedside in the wards and in the clinics. Didactic work is reduced to a minimum. As material is abundant, each student is assigned a case and is taught methods of handling and examining patients. A suitable text-book is used as a guide and regular quizzes are held. Case records are kept throughout the year.

The first semester is devoted to thorough exercise in the elicitation of physical signs and the inculcation of the methods of examination of the cardio-vascular, lymphatic, respiratory, and the alimentary systems and the abdominal organs and the central and peripheral nervous systems. The student is made acquainted with the use of the instruments of precision, including the blood pressure apparatus, the cardio-sphygmograph, stomach tube, etc. Frequent use is also made of the ophthalmoscope and laryngoscope.

The second semester is a continuation of the work of the first, but greater attention is given to the correlation and interpretation of physical signs, the student making complete physical examination of his patients. Stress is laid upon exactness and rapidity of examination in addition to tactfulness at the bedside.

Third year, 5 hours a week, throughout the year.

5. Applied Therapeutics.

Dr. BEERMAN.

Dr. Beerman lectures upon therapeutics and gives demonstrations of applied therapeutics in the wards. He also, with Drs. Lennon and Castelhun, conducts the afternoon ward classes in the City and County Hospital.

6. Out-Patient Clinic on Nervous Diseases.

Dr. LENNON.

In addition to his ward work, Dr. Lennon conducts a clinic on nervous diseases at the dispensary.

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**SURGERY.**

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical Surgery.

HARRY M. SHERMAN, A.M., M.D., Professor of the Principles and Practice of Surgery.

THOMAS W. HUNTINGTON, A.B., M.D., Professor of Clinical Surgery.

WALLACE I. TERRY, M.D., Assistant Professor of Surgery.

HENRY B. A. KUGELER, M.D., Instructor in Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

\*RAYMOND RUSSELL, B.S., M.D., Instructor in Surgery.

TRACY G. RUSSELL, A.B., M.D., Instructor in Surgery.

HENRY A. L. RYFKOGEL, M.D., Instructor in Surgery.

HARRY P. ROBERTS, M.D., Assistant in Surgery.

JACOB SCHWARTZ, M.D., Assistant in Surgery.

DUDLEY TAIT, M.D., Assistant in Surgery.

MARY BOTSFORD, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years, and while considerable emphasis is laid on the didactic lectures covering the principles of general surgery, the importance of practical training is realized. This feature of the department's work is covered by ward classes, clinics, a course in surgical pathology, and operative courses on the cadaver. The clinical material is found in the wards of the City and County Hospital, the University of California Hospital, and the U. S. A. General Hospital at the Presidio. Cases of minor surgery are treated in the Out-Patient Dispensary. During his last year the student is brought into contact with patients in the ward classes, where he is required to follow a certain number of cases throughout their course.

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\* Absent on leave, April 1 to October 1, 1911.

Operative surgery is taught in the public clinics which occur at regular periods during the entire year. In the fourth year conferences are held once in three weeks, in which papers are read and discussed under the guidance of the professor of the principles and practice of surgery. A similar meeting is conducted for the third-year class by one of the assistants.

1. General Surgery.

Professor SHERMAN.

The principles of general surgery are discussed in lectures and recitations illustrated by diagrams, photographs, wet and dry specimens, and a series of demonstrations on the cadaver. In this course prominence is given to those subjects which are of practical importance to the general surgeon.

From December to April ward classes and operative clinics are added to these.

Third and fourth years, 2 hours a week, throughout the year.

2. Clinical Surgery.

Professor HUNTINGTON and Assistants.

This course includes clinics, practical demonstrations, and bedside teaching in the wards and operating room of the University of California Hospital and the City and County Hospital. Surgical pathology, general questions of diagnosis, wound treatment and asepsis are discussed at the bedside. Special attention is paid to the treatment of fractures and dislocations. During the work the student is afforded ample opportunity for the frequent inspection of wounds in all stages of repair, and in addition is given the responsibility for the care of a certain number of cases whose histories must be followed accurately. In the lectures the choice of anaesthetics in ordinary and special cases, their administration in both local and general form, the preparation of instruments and dressings, and the selection and disinfection of ligatures and sutures are discussed. In addition there is an explanation of the application of modern technique in the numerous cases that are presented for operation.

Third and fourth years, 3 hours a week, throughout the year.

3. Surgical Pathology.

This course will present in a practical way the application of many of those points in the previous work of pathology, bacteriology, and histology which apply especially to clinical surgery. Wound healing in the skin and the formation of cicatrices, reparative processes of the different tissues and their reactions to surgical manipulations are shown experimentally. Considerable attention is paid during the course to the surgical infections and their effects on the organism. The principles of bacteriolysis, the excretion of microorganisms by means of the lymphatics through the lungs, liver and kidneys, the new formation of blood vessels and lymphatics, and the fate of absorbable suture material are demonstrated on animals. The students are required to make naked-eye descriptions of fresh surgical material and to carry through various portions of these tissues for subsequent microscopic ex-



amination. The special pathology of tumors and the infectious granulomata is discussed and illustrated by means of fresh preparations and Kaiserling specimens. The work in this course is given entirely in the laboratory and will be wholly practical.

Third year, 12 hours a week, 9 weeks.

4. Operative Surgery on the Cadaver.

Dr. KUGELER.

The classical operations are performed by the students of the class individually on the cadaver, imitating as closely as possible the arrangement and technique of the operating room.

Fourth year, 2 hours a week, 9 weeks.

5. Wound Dressing, Minor Surgery, and Bandaging.

Dr. TERRY.

This course includes the technique of wound dressing and operative treatment. Various methods of bandaging of minor surgical operations are included in this course.

Third year, 3 hours a week, one half-year.

6. Ward Classes.

The students under the direction of the officers of instruction are given charge of a series of cases for which they are made responsible. History taking, routine clinical examination, diagnosis, treatment, and subsequent care of the patient are included in this course.

Fourth year, 2 hours a week, through 1 half-year.

7. Surgical Dispensary.

Drs. RUSS, ROBERTS, and SCHWARTZ.

This course is given upon the ambulatory material at the out-patient department, and presents in an advantageous manner the particular aspects of surgical ambulatory material. The instruction is entirely practical. Students are assigned to cases, take their histories, conduct their examinations, and carry through the treatment in large part themselves.

Third year, 6 hours a week, 1 half-year.

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**MICROSCOPICAL AND CHEMICAL DIAGNOSIS.**

HERBERT W. ALLEN, B.S., M.D., Instructor in Clinical Pathology.

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology which are of assistance to the clinician in reaching a diagnosis. It aims to act as a connecting link between the work of the preclinical and clinical years. The course is given almost exclusively by the laboratory method; short explanatory talks are given as the subject-matter demands. A simple, effective, well-lighted laboratory is provided in the University Hospital, from the wards of which much of the material is derived. The wards of the City and County Hospital and of St. Luke's Hospital are also utilized for material.

Routine instruction is given on the normal and pathological conditions of the blood; particular attention being paid to accuracy in counting and to the study of the different characteristic blood diseases. If material for use is not present in the wards, specimens from the cabinet are used. An effort is made to familiarize the students thoroughly with the recognition and life history of the malarial parasite.

The examination of the urine, normal and pathological, forms an important part of the course, particular attention being paid to the microscopical examination of the sediment.

The examination of the sputum and the analysis of the gastric contents are adequately considered.

Considerable time is devoted to the examination of the feces in health and disease, particularly the recognition of parasites and their ova. Through the courtesy of the officials of the Army General Hospital at the Presidio, use may be made of the abundant tropical material in that institution.

#### 1. Microscopical and Chemical Diagnosis.

Dr. ALLEN.

Third year, four hours a week, throughout the year.

### CLINICAL PATHOLOGY.

ADELBERT W. LEE, M.D., Instructor in Pathology.

#### 1. Autopsy Course.

The classes are divided into suitable sections and instructed at the autopsy in the technic employed in systematic necroscopy. Detailed demonstration of the autopsy findings.

Two sections of one half-year each, 1 hour a week.

#### 2. Special Morphological Pathology.

In this course the diseases of one or a group of organs are systematically presented from a morphological viewpoint, appropriate gross and microscopical preparations being utilized.

Two sections of one half-year each, 1 hour a week.

### OBSTETRICS.

\*ALFRED BAKER SPAIDING, A.B., M.D., Professor of Obstetrics.

1. Lectures 2 hours per week throughout the year. During the first half-year normal pregnancy, labor, and the puerperium will be considered. During the last half-year one-half of the abnormalities of pregnancy, labor and the puerperium, and the obstetrical operations will be discussed. Required: Juniors, entire course; Seniors, last half of year.

#### 2. Clinical Lecture.

This hour will be devoted to the study of unusual obstetrical cases

\* Absent on leave, first half-year, 1911-12.

as they occur in the obstetrical wards, the demonstration of specimens, quizzes, and the presentation of student reports. Required of Juniors and Seniors.

1 hour per week, throughout the year.

### 3. Practical Obstetrics.

Each student of the Junior Class will devote two weeks as an assistant to the interne in the obstetrical wards, and will attend cases in confinement in the out-patient work of the San Francisco Maternity.

## GYNECOLOGY.

CHARLES A. VON HOFFMAN, M.D., Professor of Gynecology.

AUGUST J. LARTIGAU, M.D., Assistant Professor of Gynecology.

WILLIAM G. MOORE, M.D., Instructor in Gynecology.

Instruction in gynecology is given during the third and fourth years. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, while purely operative specialism is given secondary consideration.

### 1. Clinics in Gynecology. Professor VON HOFFMAN and Dr. MOORE.

This course is given upon the material in the wards of the City and County Hospital and the University of California Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room, those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

Fourth year, 2 hours a week, throughout the year.

### 2. Lectures in Gynecology. Professor VON HOFFMAN.

A systematic course of lectures.

Fourth year, 1 hour a week, throughout the year.

### 3. Demonstrations in Gynecology. Professor LARTIGAU.

A systematic course of lectures, combined with practical demonstrations illustrating the normal gross and microscopic anatomy, pathology, and symptomatology. Especial emphasis is laid upon pathological work in this course.

Third year, 1 hour a week, throughout the year.

### 4. Dispensary Clinics. Dr. MOORE.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

Fourth year, 18 hours for each section.

**PEDIATRICS.**

WILLIAM B. LEWITT, M.D., Professor of Pediatrics.

SANFORD BLUM, A.B., M.S., M.D., Instructor in Pediatrics.

The courses in pediatrics consist of lectures, recitations, conferences, and practical work in the Out-Patient Dispensary.

1. Lectures and Recitations.

Professor LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases of infancy and childhood and to the subject of infant feeding.

Fourth year, 1 hour a week, throughout the year.

2. Dispensary Clinics.

Dr. BLUM.

In the dispensary work the students are brought into direct contact with the cases, and in this manner the diseases are systematically studied.

Fourth year, 2 hours a week, throughout the year.

**DISEASES OF THE SKIN.**

DOUGLAS W. MONTGOMERY, M.D., Professor of Diseases of the Skin.

HOWARD MORROW, M.D., Assistant Professor of Diseases of the Skin.

LIONEL S. SCHMITT, B.S., M.D., Assistant in Diseases of the Skin.

GEORGE D. CULVER, M.D., Assistant in Diseases of the Skin.

HARRY EVERETT ALDERSON, M.D., Assistant in Diseases of the Skin.

Diseases of the Skin.

Professors MONTGOMERY and MORROW.

1. (a) The study of the histology and histo-pathology of the skin, including biopsies, preparation and examination of sections, and demonstration of specimens. A study of the bacteriology of the various cutaneous lesions is also included.
- (b) Demonstration of clinical cases, including lectures, and recitations. Once a year students are taken to the City and County Isolation Hospital, where from fifteen to twenty lepers, and such cases of variola and caricella, as are available, are demonstrated. So far as possible the microscopic and clinical aspects are studied simultaneously.
- (c) Practical clinical work. Students are trained in methods of taking histories, of making diagnoses, and prognoses, and of treatment of dermatological patients. They are also trained in the use of radiotherapy as applied to the diseases of the skin.

1½ hours a week, throughout the year.

2. Laboratory Diagnosis of Syphilis.

Dr. SCHMITT.

This includes the theory and technic of the serum diagnosis of syphilis by the Wasserman and Noguchi complement fixation reactions, and the Neme and Noguchi butyric acid reactions, and demonstrations of the methods of finding the treponema pallida by smears, sections, and the dark-field condenser.

1 hour a week for 24 weeks.

**DISEASES OF THE EYE.**

GEORGE HERMAN POWERS, A.M., M.D., Emeritus Professor of Ophthalmology.

CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.

W. SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.

EDGAR W. ALEXANDER, B.S., M.D., Assistant in Ophthalmology.

Instruction in ophthalmology is given in the wards and operating rooms of the University of California Hospital and the City and County Hospital and at the Out-Patient Dispensary.

1. Practical Work in the Physiological Laboratory.

In the second year students are instructed in the rudiments of physiological optics, including the theory of refraction, ophthalmoscopy, skiasecopy, colors, etc., and in the physiology of the eye. This course is given in the department of physiology in Berkeley.

2. Ophthalmology.

Drs. NAGEL and FRANKLIN.

The subjects covered in this course comprise the methods of examining the patient and the external and ophthalmoscopic diseases of the eye; ophthalmic surgery. Special study is made of the eye in its relation to general diseases. Students of the fourth year have the opportunity of continuing clinical work in ophthalmology throughout the term, and perfecting themselves in the laboratory methods of examination of eye specimens.

Fourth year, 2 hours a week, throughout the year.

3. Ophthalmoscopy.

Dr. ALEXANDER.

The third-year students are instructed in the bedside use of the ophthalmoscope, and the ocular conditions of patients in the medical wards are demonstrated.

Third year, 1 hour a week, throughout the year.

4. Dispensary Clinics.

Drs. NAGEL, FRANKLIN, and ALEXANDER.

Students are given facilities for personal examination and treatment of ambulatory cases in the out-patient department.

**DISEASES OF THE EAR, NOSE, AND THROAT.**

ALBERT J. HOUTSON, B.L., M.D., Instructor in Diseases of the Ear, Nose, and Throat.

BENJAMIN THOMAS, M.D., Assistant in Diseases of the Ear, Nose, and Throat.

Instruction in otology, rhinology, and laryngology is given at the City and County Hospital, the University of California Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dispensary, while the operative cases are demonstrated in the clinic at the University of California Hospital and the City and County Hospital.

1. Otology, Rhinology, and Laryngology.

Instruction in diseases of the ear, nose, and throat is given in the wards of the City and County Hospital, the University of California Hospital, and the Out-Patient Dispensary.

Fourth year, 3 clinics a week, throughout the year.

**DEPARTMENT OF GENITO-URINARY SURGERY.**

JOHN C. SPENCER, A.B., M.D., Assistant Professor of Genito-Urinary Surgery.

1. Genito-Urinary Surgery.

Professor SPENCER.

This course is entirely practical and is given in the University of California Hospital and at the Out-Patient Dispensary on ambulatory cases.

1 hour a week, throughout the year; 1 clinic a week.

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**ORTHOPEDIC SURGERY.**

SAMUEL J. HUNKIN, M.D., Instructor in Orthopedic Surgery.

CARL C. CRANE, M.D., Assistant in Orthopedic Surgery.

1. Orthopedic Surgery.

Dr. HUNKIN.

This course is entirely practical and is given at the Out-Patient Dispensary on ambulatory cases. The diagnosis and treatment of diseases of the joints, the correction of special deformities, and particularly the subject of skeletal alignment and muscular balance, are considered. Special attention is paid to the making of splints and the application and fitting of braces.

Fourth year, 2 hours a week, throughout the year.

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**MEDICAL JURISPRUDENCE.**

Lectures.

Professor D'ANCONA.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death, and the jurisprudence of insanity.

Fourth year, 1 hour a week, throughout the year.

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**HYGIENE.**

ERNEST BRYANT HOAG, B.S., A.M., M.D., Lecturer in Public Hygiene.

The principles of personal hygiene and public health. Particular attention to the early history of preventive medicine, and to the contributions to this science of Jenner, Pasteur, Lister, Koch, and others. Special topics with which every well-trained modern physician should be familiar will receive attention. These will include school hygiene and the health supervision of school children, Federal, State and Municipal hygiene. The practical relation of preventive medicine to the every-day practice of medicine will be specially emphasized.

Fourth year, 1 hour a week, throughout the year.

**GRADUATES, 1911.**

Walter Isaac Baldwin, B.S.	Eureka
Elbridge John Best, B.S.	Grass Valley
Lloyd Bryan, B.S.	Pepperwood
William Howard Campbell, B.S.	Berkeley
Kate Rawlinson Gompertz, B.S.	Berkeley
Howard Hill Markel, A.B.	Davis, Illinois

**MATRICULATES, 1910-11.***Fourth-Year Class.*

Walter Isaac Baldwin, B.S.	Eureka
Elbridge John Best, B.S.	Grass Valley
Lloyd Bryan	Pepperwood
William Howard Campbell, B.S.	Berkeley
Kate Rawlinson Gompertz, B.S.	Berkeley
Howard Hill Markel, A.B.	Davis, Illinois

*Third-Year Class.*

Samuel Ellsworth Bailey, B.S.	Redding
Ernest Winton Cleary, B.S.	Lindsay
Linwood Dozier	Oakland
Carl Leslie Hoag, B.S.	Boonville
Frank Lewis Kelley, B.S.	Oakland
Herbert Everett Long	San Francisco
Dewey Robert Powell, B.S.	Berkeley
Lionell David Prince	San Francisco
Clifford Daniel Sweet	Berkeley
Ellen Smith Stadtmuller, A.B.	San Francisco

*Second-Year Class.*

Warren Barrett Allen	Berkeley
Daniel Irwin Aller, A.B.	Forest Grove, Oregon
Claudius Ballard	Los Angeles
Hugh Kling Berkeley	Santa Monica
Edwin Cline Buel	Marysville
Joseph Henry Catton	Berkeley
Gordon Adams Clapp	Forest Grove, Oregon
Montague Cleaves	London, England
Alma Locke Cooke	Tacoma, Washington
Earl Hamilton Cornell	Oakland
Ruby Lacy Cunningham	Riverside
Margaret Henderson, B.S.	Los Angeles

Bess Grace Lewis, B.S. ....	Los Gatos
Selby Harold Marks, B.S. ....	Ukiah
Henry George Mehrrens .....	Berkeley
Ruth Charlotte Risdon, B.S. ....	Oakland
Oswald Hope Robertson .....	Berkeley
Charles Lee Lanter .....	Carson City, Nevada
Charles Ernest von Geldern .....	San Francisco
Alexander Hamilton Williamson .....	Berkeley

*First Year Class.*

Roy Charles Abbott .....	Pomona
Frank Stanley Baxter, B.S. ....	Oakland
Nathaniel Bercowitz, B.S. ....	Los Angeles
Irving Betts .....	Salinas
John Talmadge Boyer .....	San Francisco
<sup>1</sup> Charles W. Coffin, A.B. ....	Marion, Indiana
Esther Clarice Cumberland, B.S. ....	Los Angeles
Henry Ehlers .....	San Francisco
Benjamin Marsh Frees .....	Monrovia
<sup>1</sup> George Arneke Kretsinger .....	Hayward
<sup>1</sup> Alexander Thomas Leonard A.B. ....	Menlo Park
Edna Locke .....	Eureka
Melville Hammond Long, B.S. ....	San Francisco
<sup>1</sup> Kay Gustav Lorentzen, A.B. ....	San Francisco
Frank Lee Niles .....	San Francisco
<sup>1</sup> Daniel John O'Flanagan .....	Dublin, Ireland
Douglas Parker .....	Alameda
Irene May Patchett .....	Napa
George Warren Pierce .....	Pomona
Fred Nicholas Scatena .....	San Francisco
<sup>1</sup> Emily Victoria Truman, Ph.B. ....	Berkeley
Clarence Edgar Wells .....	Visalia
Henry Stafford Whisman .....	Salinas

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<sup>1</sup> In residence first half-year only.





**UNIVERSITY OF CALIFORNIA**

**COLLEGE OF MEDICINE**

**ANNOUNCEMENT FOR 1912-13**

**BERKELEY**  
**UNIVERSITY OF CALIFORNIA PRESS**  
**1912**



## CALENDAR

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### 1912.

August 5.—Undergraduate applications for admission to the Academic and Medical Departments, with credentials should be filed with the Recorder of the Faculties at Berkeley on or before August 5. This may be done by mail.

August 8.—Academic year begins.

August 8-13.—Entrance examinations at Berkeley for Freshman standing in the Academic Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before Wednesday, August 7. But applications for permits to be sent by mail should be made as far in advance of August 7 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

August 16, 17, 19, 9 a.m. to 12 m.—Office hours of the Dean at California Hall, Berkeley. Registration of first-year and second-year students in the Dean's office, California Hall.

August 17, 19, 2-4 p.m.—Registration of students of the third-year and fourth-year classes in the Dean's office in the main building of the Medical Department in San Francisco.

August 20.—Class work begins.

September 9.—Admission Day: a holiday.

November 28-30.—Thanksgiving Recess.

December 22.—Christmas vacation begins.

### 1913

January 6.—Second half-year begins.

February 22.—Washington's Birthday: a holiday.

March 23.—Charter Day: a holiday. (Charter Day exercises, March 20).

May 5.—Examinations begin.

May 14.—Commencement Day.

## REGENTS OF THE UNIVERSITY

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NOTE.—The regular meetings of the Regents are held at 2 p.m. on the second Tuesday of each month, except July, and on the day before Commencement, at the San Francisco Institute of Art, California & Mason Streets, San Francisco.

### REGENTS EX OFFICIO.

HIS EXCELLENCY HIRAM WARREN JOHNSON.....	Sacramento
<i>Governor and President of the Regents ex officio.</i>	
HIS HONOR ALBERT J. WALLACE.....	Los Angeles
<i>Lieutenant-Governor.</i>	
HON. A. H. HEWITT.....	Yuba City
<i>Speaker of the Assembly.</i>	
HON. EDWARD HYATT.....	Sacramento
<i>State Superintendent of Public Instruction.</i>	
HON. ANDREW LOWNDES SCOTT,	
Pacific Hardware and Steel Company, San Francisco	
<i>President of the State Agricultural Society.</i>	
RUDOLPH JULIUS TAUSSIG, ESQ.....	Main and Mission streets, San Francisco
<i>President of the Mechanics' Institute.</i>	
BENJ. IDE WHEELER, Ph.D., LL.D.,	
President's House, University of California, Berkeley	
<i>President of the University.</i>	

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### APPOINTED REGENTS

The term of the appointed Regents is sixteen years and terms expire March 1, of the year indicated. The names are arranged in the order of original accession to the Board.

ISAIAS WILLIAM HELLMAN, ESQ.....	1918
Wells, Fargo-Nevada National Bank, San Francisco.	
* CHESTER ROWELL, M.D. ....	1926
Fresno.	
JOHN ELIOT BUDD, A.B.....	1916
Stockton.	

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\* Died May 23, 1912.

MRS. PHOEBE APPERSON HEARST.....	1914
Pleasanton.	
Business address: 354 Pine street, San Francisco.	
ARTHUR WILLIAM FOSTER, Esq.....	1916
1210 James Flood Building, San Francisco	
GARRETT WILLIAM McENERNEY, Esq.....	1920
1277 James Flood Building, San Francisco.	
TRUXTUN BEALE, LL.B. ....	1926
Pacific Union Club, San Francisco.	
CHARLES STETSON WHEELER, B.L. ....	1928
Nevada Bank Building, San Francisco.	
GUY CHAFFEE EARL, A.B.....	1918
1005 Shreve Building, San Francisco.	
JAMES WILFRED MCKINLEY, B.S.....	1922
432-437 Pacific Electric Building, Los Angeles.	
JOHN ALEXANDER BRITTON, Esq.....	1914
445 Sutter street, San Francisco.	
FREDERICK WILLIAM DOHRMANN, Esq.....	1920
201 Geary street, San Francisco.	
WILLIAM HENRY CROCKER, Ph.B.....	1924
Crocker National Bank, San Francisco.	
PHILIP ERNEST BOWLES, Ph.B.....	1922
First National Bank, Oakland.	
JAMES KENNEDY MOFFITT, B.S. ....	1924
First National Bank, San Francisco.	
Rev. CHARLES A. RAMM.....	1928
1100 Franklin St., San Francisco.	

# OFFICERS OF THE REGENTS

HIS EXCELLENCY HIRAM WARREN JOHNSON.....	Sacramento
<i>President.</i>	
VICTOR HENDRICKS HENDERSON, B.L.....	California Hall, Berkeley
<i>Secretary and Land Agent.</i>	
RALPH P. MERRITT, B.S.....	220 California Hall, Berkeley
<i>Comptroller</i>	
ISAIAS WILLIAM HELLMAN, Jr., Ph.B.....	Union Trust Company, San Francisco
<i>Treasurer.</i>	

**FACULTY OF MEDICINE**

BENJAMIN IDE WHEELER, LL.D., Ph. D., President of the University, *ex officio* President of the Faculty.

HERBERT C. MOFFITT, B.S., M.D., Dean.

**EMERITUS PROFESSORS**

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and Operative Surgery.

GEORGE H. POWERS, A.M., M.D., Emeritus Professor of Ophthalmology.

CHARLES A. VON HOFFMAN, M.D., Emeritus Professor of Gynecology.

THOMAS W. HUNTINGTON, A.B., M.D., Emeritus Professor of Clinical Surgery.

**PROFESSORS**

HERBERT C. MOFFITT, B.S., M.D., Professor of Medicine.

FREDERICK P. GAY, A.B., M.D., Professor of Pathology.

WALLACE I. TERRY, B.S., M.D., Professor of Surgery.

**CLINICAL PROFESSORS**

WILLIAM WATT KERR, A.M., C.M., M.B., Clinical Professor of Medicine.

WILLIAM B. LEWITT, M.D., Clinical Professor of Pediatrics.

HOWARD MORROW, M.D., Clinical Professor of Dermatology.

SAMUEL J. HUNKIN, M.D., Clinical Professor of Orthopedic Surgery.

**ASSOCIATE PROFESSORS**

SAMUEL STEEN MAXWELL, B.S., M.S., Ph.D., Associate Professor of Physiology.

T. BRAILSFORD ROBERTSON, B.S., Associate Professor of Physiological Chemistry.

JOHN G. FITZ-GERALD, M.B., Associate Professor of Bacteriology.

**ASSISTANT PROFESSORS**

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

GLANVILLE Y. RUSK, A.B., M.D., Assistant Professor of Pathology.

ARTHUR RUSSELL MOORE, Ph.D., Assistant Professor of Physiology.

JEAN V. COOKE, A.B., M.D., Assistant Professor of Pathology.

**INSTRUCTORS**

HADYN M. SIMMONS, Ph.D., M.D., Instructor in Materia Medica.

HAROLD BRUNN, M.D., Instructor in Surgery.

THEODORE C. BURNETT, M.D., Instructor in Physiology.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
 HERBERT W. ALLEN, B.S., M.D., Instructor in Medicine.  
 WALTER SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.  
 RACHEL LEONA ASH, B.S., M.D., Instructor in Pediatrics.  
 WILLIAM G. MOORE, M.D., Instructor in Gynecology.  
 ANTONIO M. DAL PIAZ, M.D., Instructor in Anatomy.  
 CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.  
 ALBERT J. HOUSTON, B.L., M.D., Instructor in Laryngology, Otology and Rhinology.  
 LIONEL S. SCHMITT, B.S., M.D., Instructor in Dermatology.  
 MILTON B. LENNON, A.B., M.D., Instructor in Neurology.  
 WILLIAM B. WILLARD, M.D., Instructor in Urology.  
 EDGAR W. ALEXANDER, B.S., M.D., Instructor in Ophthalmology.  
 LOUIS I. BREITSTEIN, B.S., M.D., Instructor in Obstetrics.  
 WILLIAM F. BLAKE, A.B., M.D., Instructor in Ophthalmology.

#### ASSISTANTS

ADELBERT W. LEE, M.D., Assistant in Dermatology.  
 WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.  
 PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.  
 DUDLEY TAIT, B.S., M.D., Assistant in Experimental Surgery.  
 RENÉ BINE, M.D., Assistant in Medicine.  
 JAMES LYMAN WHITNEY, A.B., M.D., Assistant in Medicine.  
 MARY E. BOTSFORD, M.D., Assistant in Surgery.  
 BENJAMIN THOMAS, M.D., Assistant in Laryngology, Otology and Rhinology.  
 CARL C. CRANE, M.D., Assistant in Orthopedic Surgery.  
 LEROY H. BRIGGS, M.D., Assistant in Medicine.  
 LOUIS P. HOWE, M.D., Assistant in Surgery.  
 FREDERICK C. LEWITT, B.S., M.D., Assistant in Laryngology, Otology and Rhinology.  
 STERLING BUNNELL, B.S., M.D., Assistant in Surgery.  
 ANNA K. DAVENPORT, M.D., Assistant in Surgery.  
 EUGENE S. KILGORE, B.S., M.D., Assistant in Medicine.  
 SAXTON T. POPE, M.D., Assistant in Surgery.  
 WILLIAM L. BELL, M.D., Assistant in Dermatology.  
 C. B. BENNETT, Ph.D., Assistant in Physiological Chemistry.



**ADMISSION AND RESIDENCE.**

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**ADMISSION.**

Applicants for admission to the first year of the medical course and applicants for advanced standing must have completed at least two full years of preliminary training in the undergraduate departments of the University of California or of a university of equal standing. As evidence of this preliminary training, they must present a Junior Certificate of this University or its equivalent. They should give evidence of sufficient training in Physics, Chemistry and Biology to enable them to pursue with profit the curriculum of the college, and should possess a reading knowledge of German. [The following courses now offered may be regarded as representing the minimum of satisfactory preparation in the sciences named: Physics 2A, 2B (instead of recitations courses 3A, 3B may be substituted); Chemistry 1A, 1B, 3A, 3B, 8A, 8B, 8C; Zoology 1A, 1B, 108.]

These courses or their equivalent together with a reading knowledge of German will be required of matriculants in Medicine in August, 1914, and thereafter.

The Dean and Professors Gay and Moody will be in California Hall, August 16, 17 and 19, to meet the students preparing to enter medicine.

**THE COMBINED COURSE**

Students in the Colleges of Letters, Social Sciences, or Natural Sciences who have received the Junior Certificate and who, in addition to the work of the Junior Certificate, have completed a full year of work in the Upper Division, may, at the beginning of their fourth or senior year in the University, register as students in the College of Medicine and, upon completion of the first year in the College of Medicine, may receive the degree of A.B., B.L., or B.S. Students who enter the College of Medicine in accordance with the foregoing provision will be expected normally to have completed 94 units of University work in the academic departments, including such work in major courses as may be acceptable to the faculty of the college in which the student proposes to take his academic degree.

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**ADVANCED STANDING**

Students of recognized medical colleges are admitted to the second-year, third-year and fourth-year classes only upon examination covering the subjects in which they seek to be accredited. They must first present evidence that they have satisfied the regular matriculation requirements and obtain from the Dean authorization for examination.

### LOCATION

The work of the first two years of the Medical Department is at present conducted at Berkeley.

The work of the third and fourth years is carried on at the University Hospital, 2nd and Parnassus Avenues, San Francisco. As soon as the new hospital is built, all departments will be brought together in San Francisco.

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### BOARDING

The expense of living in Berkeley and San Francisco is not great. Good board with room may be procured at the rate of twenty-five dollars per month at a convenient distance from the College buildings.

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### ORGANIZATION AND CLINICAL FACILITIES

At a meeting in April, 1912, the Regents of the University adopted a plan for reorganization of the work of the last two years. Three main departments were created:—Medicine, Surgery, Gynecology and Obstetrics. A salary of six thousand dollars a year was apportioned to the department of gynecology and obstetrics to put this at once upon an academic basis. No head has as yet been selected for this department. The professors appointed in medicine and surgery have agreed to devote half their time to the needs of the school. Funds have been provided to pay three assistants in medicine and two in surgery, to maintain an x-ray department and to provide a pathologist who devotes all his time to the hospital.

Appointments as chiefs of the main department are to be regarded as permanent. Clinical professors, instructors and assistants are subject to appointment each year.

### THE UNIVERSITY OF CALIFORNIA HOSPITAL

Through contributions made by charitable persons a hospital equipment has been installed in the main building of the Medical Department at Second and Parnassus avenues, San Francisco. The hospital was opened April 11, 1907, and has been in active operation since.

It is under the complete control of the Board of Regents of the University.

On the first floor are the offices of administration, the hospital library and rooms for internes. On the second floor is a well equipped main operating room, two small operating rooms, an X-ray department and three wards devoted to medicine, surgery and gynecology. These wards contain 36 beds and on the third floor is a ward of 10 beds for

obstetrical cases with an adjoining nursery and suitable delivery and isolation rooms. Single rooms on the third floor provide accommodation for 10 or 12 additional cases. Practically all patients are available for teaching purposes and, through an endowment fund and contributions from friends of the University, it is made possible during the coming year to provide free beds sufficient to keep the hospital running at its full capacity.

The basement of the building is being refitted to meet the requirements of the Out-Patient Department and funds have been provided by the Regents to remodel the buildings of the Veterinary Department for the needs of medicine and to equip pathological and other research laboratories. This work will be finished by August, 1912.

#### SAN FRANCISCO HOSPITAL (Formerly City & County Hospital)

The ward work and clinics held in the University Hospital are supplemented by similar courses given in the San Francisco Hospital. The medical schools in San Francisco are given practical control of the clinical material in the hospital, the University controlling 2/9 or approximately 100 beds, so that as far as purposes of instruction are concerned some of these wards are equivalent to a private hospital controlled by the department.

#### PRESIDIO MILITARY HOSPITAL

Through the courtesy of the commanding officer of the medical department of the military post at the Presidio, students of the University have access to the wards of this hospital, in which they may study medical and surgical cases under the direction of the medical service of the post.

Owing to the recent acquisition of the Hawaiian and Philippine Islands and the consequent establishment of a large garrison on the Government reservation in San Francisco, abundant opportunity for the study of the different phases of many tropical diseases is afforded.

#### THE SAN FRANCISCO MATERNITY

Arrangements have been made with the Board of Directors of the San Francisco Maternity for instruction in practical obstetrics to members of the fourth-year class. Each student is detailed to the out-patient service for a period of two weeks, during which time he makes examinations of pregnant women; attends, with an interne, patients in labor and makes daily post-partum visits to the patient's home. Finally he examines women post-partum for discharge, reporting on the condition of both mother and baby. During the past year two hundred and twenty patients were treated at the institution.

## HOSPITAL APPOINTMENTS

The position of interne in the University of California Hospital is open each year to six members of the graduating class who recommend themselves to the Faculty by their general fitness for the appointment. Internes serve for one year and have opportunities for obtaining experience in various fields of medicine and surgery. Internships in the San Francisco Hospital also are awarded to two members of the graduating class upon the recommendation of the Faculty. Internships in some of the private hospitals in San Francisco are filled annually either upon the recommendation of the College of Medicine or by competitive examination.

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FEES*First Year*

Tuition .....	\$150.00
Dissecting material .....	15.00

The fees are payable at the time of matriculation. Students may pay one-half of the tuition fee at the beginning of each term.

A key and breakage deposit of \$25 is required for the use of lockers and to cover the cost of material used in the laboratories and damage to College buildings and equipment. At the close of the session the unexpended balance is returned to the student.

A rental of \$5 a year is charged for the use of a microscope, and \$2 for an immersion lens. Each student must provide himself with a microscope.

*Second Year*

Tuition .....	\$150.00
A key and breakage deposit of .....	25.00

*Third Year*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

*Fourth Year*

Tuition .....	\$150.00
A key and breakage deposit of .....	10.00

## LIBRARY

Through the generosity of Mrs. Phoebe Hearst and Mrs. William H. Crocker, the departmental collections in anatomy, physiology and pathology are unusually complete. The hospital library contains 3,000 volumes, including many of the current text books and better monographs. Current numbers of the best American, English, French and German journals are kept on file and during the coming year instruction will be given in historical medicine, in the use of catalogues, indices, etc., in order to encourage, in every way possible, the student's work in the library.

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## ORGANIZATION OF INSTRUCTION

## SESSION OF 1912-13

*Summary of Courses.* Instruction is divided into three classes: didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory session, bedside study, and sectional dispensary work.

Eighteen hours of didactic teaching constitute one unit, while thirty-six hours of demonstrations and clinics have the same value.

This is also the valuation for such practical courses as include the entire instruction in the subject. Fifty-four hours of practical work which is associated with a didactic course constitute one unit. The unit-valuation of practical work thus depends upon whether it is a part or the whole of the instruction, since the scope of work will obviously be different. For example, the laboratory work in physiology accompanies a didactic course upon physiology, and the ward classes in surgery accompany didactic and clinical courses in surgery. Of such practical work fifty-four hours constitute a unit. On the other hand, the laboratory course in bacteriology comprises all the work in bacteriology, and possesses the corresponding scope, and of this work thirty-six hours constitute one unit.

Thirty-two to thirty-six units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated.

Students may take advantage of the elective courses offered by the departments of Anatomy, Physiology, and Pathology.

Instruction extends through thirty-six weeks.

## CLASS STANDING AND EXAMINATION

For the determination of class standing and for advancement and graduation the results and markings of all studies and examinations conform to the procedures followed in the Academic Department of the University. The numerals 1, 2, 3 indicate that the student has passed in the first, second and third grade; 4 indicates condition; 5 failure.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations.

During or at the close of each academic year the following examinations are held:

*First Year.*—Microscopic anatomy, chemical physiology, systematic human anatomy.

*Second Year.*—Regional and topographical anatomy and normal physical diagnosis, neurology, physiology, pharmacology and pathology, comprising bacteriology, protozoology, immunology, morbid anatomy and histo-pathology.

*Third Year.*—Materia Medica, clinical pathology, obstetrics, surgery, medicine and hygiene.

*Fourth Year.*—Medicine, therapeutics, surgery, gynecology, operative obstetrics, medical jurisprudence, pediatrics, dermatology, otology, rhinology and laryngology, ophthalmology, urology, neurology and psychiatry, orthopedic surgery and radiography.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in

one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of the departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for reëxamination at the beginning of the next academic year, or be required to repeat the course. The Faculty reserves the right to sever the connection of any student with the Medical Department at any time for what it deems either mental or moral unfitness for a career in medicine.

### REQUIREMENTS FOR GRADUATION

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.
2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.
3. He must have done the required work and passed the stated examinations.
4. He must have paid in full the college fees.

### SCHEDULE OF STUDIES

	FIRST YEAR	Hours per week	Total hours
<i>First Half-Year.</i>			
Anatomy .....	16		256
Histology and Microscopic Organology .....	16		256
<i>Second Half-Year.</i>			
Anatomy .....	20		320
Biochemistry .....	20		320
	SECOND YEAR		
<i>First Half-Year.</i>			
Anatomy of the Nervous System and Sense Organs .....	8		128
Physiology .....	24		384
Pharmacology .....			40
<i>Second Half-Year.</i>			
Bacteriology and Protozoology .....	8		128
Infection and Immunity .....	8		128
Morbid Anatomy and Histopathology .....	16		372
Regional and Topographical Anatomy and Normal Physical Diagnosis .....	6		96

**THIRD YEAR**

General Medicine .....	360
General Surgery .....	360
Clinical and Pathological Conferences .....	180
Physical Diagnosis .....	72
Microscopic and Chemical Diagnosis .....	144
Therapeutics .....	36
Dietetics and Diseases of Metabolism .....	36
Materia Medica and Toxicology .....	36
Pharmacology .....	72
Pediatrics .....	36
Neurology .....	36
Obstetrics .....	108
Gynecology .....	36
Ophthalmology .....	36
Urology .....	36
Laryngology, Otology, Rhinology .....	36

**FOURTH YEAR**

General Surgery .....	432
General Medicine .....	324
Clinical and Pathological Conferences .....	90
Therapeutics .....	36
Dermatology and Syphilis .....	72
Dietetics and Diseases of Metabolism .....	36
Neurology .....	108
Pediatrics .....	60
Obstetrics .....	36
Gynecology .....	108
Orthopedics .....	72
Ophthalmology .....	72
Otology, Laryngology, Rhinology .....	72
Urology .....	72
Radiography .....	36
Medical Jurisprudence .....	36



## FIRST YEAR

*First Semester*

	8:00-12:00	1:00-4:00 First 8 weeks.	1:00-5:00 Second 8 weeks
Monday	Histology; Microscopic Organology.	Osteology, Syndesmology, etc.	Systematic Human Anatomy. Head and neck; Arm and thorax; Leg and abdomen.
Tuesday	Histology; Microscopic Organology.	Osteology, Syndesmology, etc.	Systematic Human Anatomy. Head, neck, etc.
Wednesday			Systematic Human Anatomy. Head, neck, etc.
Thursday	Histology; Microscopic Organology.	Osteology, Syndesmology, etc.	Systematic Human Anatomy. Head, neck, etc.
Friday	Histology; Microscopic Organology.	Osteology, Syndesmology, etc.	Systematic Human Anatomy. Head, neck, etc.

*Second Semester*

	8:00-12:00	1:00-5:00
Monday	Systematic Human Anatomy. Head and neck; Arm and thorax; Leg and abdomen.	Biochemistry.
Tuesday	Systematic Human Anatomy. Head and neck; Arm and thorax; Leg and abdomen.	Biochemistry.
Wednesday	Systematic Human Anatomy. Head and neck; Arm and thorax; Leg and abdomen.	Biochemistry.
Thursday	Systematic Human Anatomy. Head and neck; Arm and thorax; Leg and abdomen.	Biochemistry.
Friday	Systematic Human Anatomy. Head and neck; Arm and thorax; Leg and abdomen.	Biochemistry.

**SECOND YEAR**

***First Semester***

	8:00-12:00	1:00-2:00	2:00-5:00
Monday	Physiology.	Pharmacology	
Tuesday	Physiology.	Neurology	
Wednesday	Physiology.	Pharmacology	
Thursday	Physiology.	Neurology	
Friday	Physiology.	Pharmacology	
Saturday	Physiology.	Pharmacology	

***Second Semester***

	8:00-11:00	11:00-12:00	1:00-5:00
Monday	Morbid Anatomy and Histopathology.		Bacteriology and Immunology.
Tuesday	Regional Anatomy and Physical Diagnosis	Lecture Immunology.	Bacteriology and Immunology.
Wednesday	Morbid Anatomy and Histopathology.		
Thursday	Morbid Anatomy and Histopathology.	Lecture Immunology.	Bacteriology and Immunology.
Friday	Regional Anatomy and Physical Diagnosis		Bacteriology and Immunology.
Saturday	Morbid Anatomy and Histopathology.		

**THIRD-YEAR CLASS**  
*First Semester*

	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00
Monday	Surgery.	Medicine.	Medical Clinics.		Ophthalmoscopy.	Pharmacology.	Obstetrics.	
Tuesday S. F. Hospital	Clinical Medicine.	Ophthalmology. Otology. Laryngology. Rhino-logy.	Physical Diagnosis.	Pathology.	Pathology.	Surgical Ward Work.		
Wednesday	Microscopic and Chemical Diagnosis.	Clinics Medical and Surgical.		Clinical and Pathological Conferences.	Obstetrics.			
Thursday S. F. Hospital	Clinical Medicine.	Ophthalmology. Otology. Rhino-logy. Laryngology.	Physical Diagnosis.	Surgery.	Surgical Ward Work.		Neurology.	
Friday	Medicine.	Surgery.	Surgical Clinics		12:45-1:45 Dietetics and Diseases of Metabolism.	Hygiene.	Materia Medica. Toxicology. Therapeutics.	Obstetrics.
Saturday	Therapeutics.	Gynecology.	Microscopic and Chemical Diagnosis.					

THIRD-YEAR CLASS  
Second Semester

	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00
Monday	Surgery	Medicine.	Medical Clinics.		Ophthalmology.	Pharmacology.		Obstetrics.
Tuesday S. F. Hospital	Clinical Medicine.	Ophthalmology. Otolaryngology. Rhino-logy.	Physical Diagnosis.	Pathology.		Medical Ward Work.		
Wednesday	Microscopic and Chemical Diagnosis.	Clinics Medical and Surgical.		Clinical and Pathological Conferences.		Obstetrics.		
Thursday S. F. Hospital	Clinical Medicine.	Ophthalmology. Otolaryngology. Rhino-logy.	Physical Diagnosis.	Surgery.		Medical Ward Work.		Neurology.
Friday	Medicine.	Surgery.	Surgical Clinics.		12:45-1:45 Dietetics and Diseases of Metabolism.	Hygiene		Materia Medica. Obstetrics. Toxicology. Therapeutics.
Saturday	Therapeutics	Gynecology.	Microscopic and Chemical Diagnosis.					

**FOURTH-YEAR CLASS**  
*First Semester*

	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00
<b>Monday</b>	Surgery.	Medicine.	Clinics.	Medical Jurisprudence.	Medical Jurisprudence.	Medical Ward Classes.	Obstetrics.	
<b>Tuesday</b> S. F. Hospital	Clinical Medicine.	Pediatrics.	Gynecology.	Surgery.		Medical Ward Work.		
<b>Wednesday</b>	Syphilis.	Dermatology	Clinics.	Clinical and Pathological Conferences.		Orthopedics.		
<b>Thursday</b> S. F. Hospital	Clinical Medicine.	Pediatrics 1 semester. Dermatology 3 semester.	Gynecology.	Surgery.		Medical Ward Work.		Neurology.
<b>Friday</b>	Medicine.	Surgery.	Clinics.	12:45-1:45 Dietetics and Diseases of Metabolism.		Surgical Ward Work.		Radiography.
<b>Saturday</b>	Therapeutics.	Urology.	Gynecology.	Clinics.				

FOURTH-YEAR CLASS  
Second Semester

	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00
Monday	Surgery.	Medicine.	Clinics.		Medical Jurisprudence.	Medical Ward Classes.		Obstetrics.
Tuesday S. F. Hospital	Clinical Medicine.	Pediatrics.	Gynecology.	Surgery.		Surgical Ward Work.		
Wednesday	Syphilis.	Dermatology.	Clinics.		Clinical and Pathological Conferences.		Orthopedics.	
Thursday S. F. Hospital	Clinical Medicine	Pediatrics 4 semester. Dermatology 3 semester.	Gynecology.	Surgery.	Surgical Ward Work.		Neurology.	
Friday	Medicine.	Surgery.	Clinics.		12:45-1:45 Dietetics and Diseases of Metabolism.	Surgical Ward Work.	Radiography.	
Saturday	Therapeutics.	Urology	Gynecology.	Clinics.				

**ANATOMY**

ROBERT ORTON MOODY, M.D., Assistant Professor of Anatomy.

ANTONIO M. DAL PIAZ, M.D., Instructor in Anatomy.

\*RICHARD W. HARVEY, M.S., Instructor in Anatomy.

IRENE A. PATCHETT, Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corruptions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

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**MICROSCOPIC ANATOMY**

The various tissues and organs of the body are studied from the development point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the

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\* Absent on leave, 1912-13.

student is given numerous comparative specimens. Routine sections are, as a rule, prepared by the technical assistant and are only mounted by the student. On the completion of a group of closely related subjects, the student is required to incorporate the results of his laboratory work in a paper fully covering the ground. The paper must be illustrated with the laboratory drawings and contain an epitome of the student's notes and collateral reading. The drawings are made from preparations of human material wherever this is possible.

101. Histology.

Dr. DAL PIAZ.

In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. This study is always comparative.

First year, 2 laboratory periods, 2 lectures a week, first half-year.  
4 units.

102. Microscopic Organology.

Dr. DAL PIAZ.

The organs are discussed with reference to their form, arrangement, and the number of the fundamental tissues composing them, with special reference to their structural and functional relations to other organs. In each case the students begin their study with the structures in situ, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 2 laboratory periods, 2 lectures a week, first half-year.  
4 units.

103. Neurology and the Sense Organs.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in Course 1 is used as the unit in the construction of the nervous system with a view of tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

Second year, 2 lectures, 2 laboratory periods a week, first half-year.  
4 units.

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**SYSTEMATIC HUMAN ANATOMY**

The laboratory method is largely used in giving the courses in systematic human anatomy, with occasional lectures and formal quizzes. An oral examination is required at the completion of the dissection of each part. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of the visual images rather



than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin-hardened sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

#### 104. Osteology.

Students are required to become familiar with the detailed characters and differential peculiarities of each bone in the body. A disarticulated skeleton is lent to each student and mounted skeletons and models of the joints are provided for use in the laboratory.

First year, first half-year. M Tu Th F, 1-4, first 8 weeks. 2 units.

#### 105. Head and Neck. Assistant Professor MOODY and Dr. DAL PIAZ.

First half-year, second 8 weeks, M Tu W Th F, 1-5. Second half-year, 16 weeks, M Tu W Th F, 8-12.  $3\frac{1}{2}$  units.

#### 106. Arm and Thorax. Assistant Professor MOODY and Dr. DAL PIAZ.

First half-year, second 8 weeks, M Tu W Th F, 1-5. Second half-year, 16 weeks, M Tu W Th F, 8-12.  $3\frac{1}{2}$  units.

#### 107. Leg and Abdomen. Assistant Professor MOODY and Dr. DAL PIAZ.

First half-year, second 8 weeks, M Tu W Th F, 1-5. Second half-year, 16 weeks, M Tu W Th F, 8-12.  $3\frac{1}{2}$  units.

#### 108. Regional and Topographical Anatomy and Normal Physical Diagnosis. Assistant Professor MOODY.

Second half-year.

Living models, special dissections and sections of the body are used in this course to enable the student to become more familiar with structural relations and to assemble information obtained in preceding dissections. The normal heart and lung sounds and the mapping out of organs by percussion are studied on the living models. 2 units. Tu F, 8-11.

Prerequisite: courses 105, 106, and 107.

#### 109. Special Anatomy for Physicians and Advanced Students.

Assistant Professor MOODY.

Hours arranged to suit applicants.

#### 210. Research.

Assistant Professor MOODY.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of the head of the department. The course also gives opportunity for those wishing to gain experience in special Histological Technique

and in the construction of papers for publication. If the results obtained merit it, they will be published. To cover the cost of material expensive to obtain, chemicals, etc., a laboratory fee of \$5 will be charged. Hours optional.

2. **Histological Technique.**

Mr. MILLER.

Designed for those wishing to further familiarize themselves with the general and special methods of obtaining, fixing, embedding, sectioning, staining, and mounting material for microscopical examination. The course is optional. It cannot be substituted for work required in the Medical Department. Hours to be arranged. Laboratory fee to cover cost of material, \$10.

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**PHYSIOLOGY**

SAMUEL STEEN MAXWELL, Ph.D., Associate Professor of Physiology.

T. BRAILSFORD ROBERTSON, Ph.D., Sc.D., Associate Professor of Physiological Chemistry.

ARTHUR RUSSELL MOORE, Ph.D., Assistant Professor of Physiology.

THEODORE C. BURNETT, M.D., Instructor in Physiology.

C. B. BENNETT, Ph.D., Assistant in Physiological Chemistry.

L. R. BEAUCHAMP, Technical Assistant.

The required courses are 103, 104 and 106. The remaining courses are open to those students who have the time and the preparation necessary to pursue them with profit.

Attention should be called to the fact that the equipment of the department offers unusual opportunities for research both in the Rudolph Spreckels Laboratory at Berkeley and in the Herzstein Research Laboratory at New Monterey.

The equipment in the Rudolph Spreckels Physiological Laboratory comprises in addition to the apparatus and conveniences for the customary lines of work in mammalian physiology ample facilities for research in physiological chemistry and experimental biology. The department library contains complete sets of all the important physiological journals, and the more important monographs on physiological and related subjects. The Herzstein Research Laboratory at New Monterey offers facilities for the investigation of problems in marine biology.

**UPPER DIVISION COURSES**

103. **Biochemistry.** Associate Professor ROBERTSON and Dr. BENNETT.

Chemistry of the constituents of living matter; chemical dynamics of life-phenomena; chemical physiology of the blood, digestion and metabolism.

Lectures 5 hrs., laboratory 15 hrs., second half-year; 10 units. Free elective.

104. **Physiology.**

Associate Professor MAXWELL, Dr. BURNETT and Dr. BENNETT.

Physiology of the muscle, nerve, central nervous system and sensation, circulation, respiration and secretion.

Lectures, 6 hrs., laboratory 18 hrs., first half-year; 12 units.

106. Pharmacology. Associate Professor ROBERTSON.  
Lectures 3 hrs., second half of first half-year; 2 units. M W F, 1-2.
- 111A. Advance Physiology. Associate Professor MAXWELL.  
Laboratory three afternoons a week with occasional lectures; first half-year; 4 units.
- 111B. Advance Chemical Biology. Associate Professor ROBERTSON.  
Laboratory three afternoons a week with occasional lectures; second half-year; 4 units.
212. Research Work in Physiology. Associate Professor MAXWELL.
213. Research Work in Physiological Chemistry. Associate Professor ROBERTSON.

### **PATHOLOGY AND BACTERIOLOGY**

FREDERICK P. GAY, A.B., M.D., Professor of Pathology.  
JOHN G. FITZ-GERALD, M.B., Associate Professor of Bacteriology.  
GLANVILLE Y. RUSK, A.B., M.D., Assistant Professor of Pathology.  
JEAN V. COOKE, A.B., M.D., Assistant Professor of Pathology.  
ADELBERT W. LEE, M.D., Instructor in Pathology.  
IVAN C. HALL, A.B., M.S., Assistant in Bacteriology.

Instruction in Pathology and Bacteriology is given in the Hearst Laboratory of Pathology and Bacteriology in Berkeley during the second year and at the University of California Hospital and the San Francisco Hospital during the third and fourth years.

The course in Pathology aims to outline the natural history of disease. The instruction is for convenience divided into three correlated courses dealing respectively with causation, progress and effect.

#### **101. Bacteriology and Protozoology.**

Associate Professor FITZ-GERALD and Mr. HALL.

Bacteriological methods are first taught; the preparation of culture media, the isolation of bacteria in pure culture, and the morphology and cultural characteristics of bacterial species. The pathogenic bacteria are then taken up in relation to specific diseases. The lower animal parasites concerned in systemic diseases are then considered. Lectures are employed for outlining general principles, the work being largely practical.

Second half-year, 8 hrs.; 3 units.

#### **102. Infection and Immunity.**

Professor GAY.

The course presents the most accessible aspects of functional pathology. It traces the evolution of infectious diseases in the body and the mechanism of animal defense. Experimental methods of studying infection are demonstrated and so far as practicable carried out by the student. A systematic course of lectures will outline the principles of Immunology with a consideration of their applicability in the diagnosis and treatment of disease. These lectures may be taken by non-medical students without laboratory work.

Second half-year; 8 hours; 3 units. Lecture course, 2 hours; 2 units.

103. Morbid Anatomy and Histopathology. Assistant Professor RUSK.

The organ and tissue changes in disease in the animal and particularly in the human body will be studied in this course. Macroscopic lesions will be illustrated by fresh material from autopsies, museum specimens and lantern demonstrations, and the microscopic appearances will be studied by means of a loan collection of prepared slides. Experimental lesions are used to emphasize the evolution of such processes. This course, whereas largely practical, is considered systematically in lectures and conferences.

Second half-year, 16 hours; 6 units.

104. Autopsy Course.

During the third and fourth years an autopsy course is conducted in the University of California Hospital and the San Francisco Hospital. The members of the class witness and participate in the autopsies held upon the subjects, which during life were the objects of the clinical study by the same students.

105. Clinical Pathological Conferences.

**GRADUATE COURSES**

201. Research.

Professor GAY.

Problems of Infection and Immunity.

Either half-year. Hours and units to be arranged.

202. Research. Neuropathology.

Assistant Professor RUSK.

Either half-year. Hours and units to be arranged.

**DEPARTMENT OF MEDICINE**

HERBERT C. MOFFITT, B.S., M.D., Professor of Medicine.  
WILLIAM WATT KERR, A.M., C.M., M.B., Clinical Professor of Medicine.  
WILLIAM B. LEWITT, M.D., Clinical Professor of Pediatrics.  
HOWARD MORROW, M.D., Clinical Professor of Dermatology.  
JOHN G. FITZ-GERALD, M.B., Associate Professor of Bacteriology.  
JEAN V. COOKE, A.B., Assistant Professor of Pathology.  
HADYEN M. SIMMONS, Ph.D., M.D., Instructor in Materia Medica.  
GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
HERBERT W. ALLEN, B.S., M.D., Instructor in Medicine.  
RACHEL L. ASH, B.S., M.D., Instructor in Pediatrics.  
LIONEL S. SCHMITT, B.S., M.D., Instructor in Dermatology.  
MILTON B. LENNON, A.B., M.D., Instructor in Neurology.  
ADELBERT W. LEE, M.D., Assistant in Dermatology.  
WILFRED F. BEERMAN, Ph.G., M.D., Assistant in Medicine.  
PAUL CASTELHUN, B.S., M.D., Assistant in Medicine.  
RENÉ BINE, M.D., Assistant in Medicine.  
JAMES LYMAN WHITNEY, A.B., M.D., Assistant in Medicine.  
LEROY H. BRIGGS, M.D., Assistant in Medicine.  
EUGENE S. KILGORE, B.S., M.D., Assistant in Medicine.  
WILLIAM L. BELL, M.D., Assistant in Dermatology.

The department of medicine includes pediatrics, neurology and dermatology. Instruction is given at the San Francisco and the University of California Hospitals, and is largely clinical.

**INSTRUCTION AT THE SAN FRANCISCO HOSPITAL****1. Clinics and Internal Medicine. Professor KERR.**

This course consists of clinics, clinical conferences, lectures and demonstrations upon the material in the medical wards of the San Francisco Hospital. Students are assigned to the beds for study of individual cases.

Third year, 2 hours a week, throughout the year.

Fourth year, 2 hours a week, throughout the year.

**2. Bedside Instruction.**

Professor KERR, Drs. EBRIGHT, CASTLEHUN, BEERMAN.

The class is divided into sections for ward class work. These sections consist of not more than six students who are assigned to the wards twice weekly. In the wards they are taught history taking, proper methods of physical examination and differential diagnosis. By reason of their regular attendance students can closely follow the treatment of their cases. In connection with the ward work students make analysis of the blood, gastric contents and urine.

**3. Physical Diagnosis.****Dr. EBRIGHT.**

Didactic work is reduced to a minimum. As material is abundant each student is assigned a case and is taught methods of examination. A suitable text book is used as a guide and regular quizzes are held. The first semester is devoted to physical signs and to practice in the use of instruments of precision including the blood pressure apparatus, the cardio-sphygmograph, stomach tube, ophthalmoscope and laryngoscope. In the second semester greater attention is given to the correlation and interpretation of physical signs, the student making complete physical examinations of his patients.

Third year, 3 hours a week, throughout the year.

**INSTRUCTION AT THE U. OF C. HOSPITAL**

Beginning with this year clinical work at the University of California Hospital is being placed upon an academic basis. In Medicine, Professor Moffitt, Dr. Whitney, Dr. Kilgore and Dr. Briggs give at least half their time to the needs of the department. The material of the hospital offers unusual advantages to students as it is made up wholly of acute cases, and because of opportunities to make use of the various laboratories of the school, to follow borderline cases into the surgical wards, and to correlate clinical signs with autopsy finding.

**4. Clinics and Medicine.****Professor MOFFITT.**

All important diseases will, as far as possible, be illustrated by suitable cases during the course of the two years instruction. Owing to the provision for free hospital beds, interesting patients from the out-patient department can be taken into the wards and properly studied. When necessary didactic lectures or text book work will supplement clinical instruction.

Third year, 2 hours a week, throughout the year.

Fourth year, 2 hours a week, throughout the year.

**5. Physical and Differential Diagnosis.****Professor MOFFITT, Drs. WHITNEY, KILGORE and BRIGGS.**

Sections of the class will be taken in the wards and out-patient department and drilled in methods of history taking and physical examination, including methods of investigation of the nervous system. Cabot's Physical Diagnosis and Differential Diagnosis, Sahli's Untersuchungs Methoden will serve as text books.

Third year, 5 hours a week, throughout the year.

**6. Microscopical and Chemical Diagnosis.****Dr. ALLEN.**

It is the purpose of this instruction to give the students practical and effective training in the use of those methods and principles of microscopic anatomy, pathology, and physiology which are of assistance to the clinician in reaching a diagnosis. It aims to act as a connecting link between the work of the preclinical and clinical years. The course is given almost exclusively by the laboratory method; short explanatory talks are given as the subject-matter demands. A simple, effective, well-

lighted laboratory is provided in the University Hospital, from the wards of which much of the material is derived. The wards of the City and County Hospital and of St. Luke's Hospital are also utilized for material. Routine instruction is given on the normal and pathological conditions of the blood; particular attention being paid to accuracy in counting and to the study of the different characteristic blood diseases. If material for use is not present in the wards, specimens from the cabinet are used. An effort is made to familiarize the students thoroughly with the recognition and life history of the malarial parasite.

The examination of the urine, normal and pathological, forms an important part of the course, particular attention being paid to the microscopical examination of the sediment.

The examination of the sputum and the analysis of the gastric content are adequately considered.

Considerable time is devoted to the examination of the feces in health and disease, particularly the recognition of parasites and their ova. Through the courtesy of the officials of the Army General Hospital at the Presidio, use may be made of the abundant tropical material in that institution.

Third year, four hours a week, throughout the year.

#### 7. Clinical Pathological Conferences.

Professor MOFFITT and Dr. COOKE.

This exercise aims at the correlation of clinical and pathological findings, cases going to autopsy will be discussed from the clinical standpoint, the history reviewed and reasons for the diagnosis advanced; the pathologist will show in detail wherein his examination confirms or disproves the clinician's conclusions. A number of hours during the year will be given over to a conjoint discussion, of a few of the great infections—as tuberculosis, syphilis, pneumonia, typhoid.

Third year, 2 hours a week, throughout the year.

Fourth year, 2 hours a week, throughout the year.

#### 8. Clinical Ward Exercises.

Drs. WHITNEY, KILGORE and BRIGGS.

Senior students will be assigned to beds and serve as clinic clerks.

They will be answerable for laboratory work and under direction, will perform spinal puncture, paracentesis of thorax and abdomen, venesection, etc. Attention will be given to practical therapeutical measures, intravenous injections, the application of cautery, leeches, poultices, the administration of enemata, massage, Bier treatment, Nanneim baths, etc.

Fourth year, 4 hours a week, throughout the year.

#### 9. Dietetics and Diseases of Metabolism.

Dr. BINE.

A short course will be given on the physiology of nutrition and on the digestibility and nutrient values of the different foods, including the analysis of standard dietaries. Special attention will be paid to the use of foods in the treatment of nephritis, diabetes

nephrolithiasis, gout, obesity, undernourished states as well as to rectal feeding and the use of artificial foods. The practical application of these methods will be illustrated by the treatment of these diseases in the hospital wards, the senior students charting and keeping track of the diets in all cases. The dietetic treatment of such gastro-intestinal diseases as hyperacidity, acidity, gastric ulcer, constipation, intestinal putrefaction will also be illustrated by ward cases.

Fourth year, 1 hour a week, throughout the year.

10. Therapeutics.

Dr. BEERMAN.

Lectures and demonstrations in the wards.

Third year, 1 hour a week, throughout the year.

Fourth year, 1 hour a week, throughout the year..

11. Pediatrics.

Professor LEWITT and Dr. ASH.

The course in pediatrics consists of lectures, recitations and clinical work in the out-patient dispensary and children's wards of the University of California and San Francisco Hospitals.

1. Lectures and Recitations.

Professor LEWITT.

Consideration is given to those ailments of children most frequently met with; particular attention is devoted to the infectious diseases and to the subject of the feeding of children during infancy and early childhood, including a study of the percentage and caloric methods of expressing food values.

Fourth year, 2 hours a week, throughout the year.

2. Dispensary Clinic.

Dr. ASH.

In the dispensary cases are assigned to students for history taking and study; and instruction is given in the methods of examining sick children.

Third year, 1 hour a week, throughout the year.

Fourth year, 1 hour a week, throughout the year.

12. Neurology and Psychiatry.

Dr. LENNON.

1. Clinical Neurology.

(a) Demonstration of Neurological cases in the University wards of the San Francisco Hospital on Thursdays at 4 p.m. The methods of examination will be particularly elucidated and attention given to Electro Therapeutics.

Third year, 1 hour a week, throughout the year.

Fourth year, 1 hour a week, throughout the year.

(b) Demonstration of Neurological cases in the out-patient department and wards of the University of California Hospital on Wednesday at 11 a.m.

Fourth year, 1 hour a week, throughout the year.

2. Neuropathology.

Demonstration of pathological sections of the brain and cord, with a discussion of the same. In this course the more intricate problems of neurology will be reviewed. Saturdays at 11 a.m.

Fourth year, first semester, 1 hour a week.

3. Psychiatry.

Saturdays at 11 a.m.

Fourth year, second semester, 1 hour a week.



## 13. Dermatology.

Professor MORROW.

## 1. Diseases of the Skin.

- (a) The study of the histology and histo-pathology of the skin, including biopsies, preparation and examination of sections, and demonstration of specimens. A study of the bacteriology of the various cutaneous lesions is also included.
- (b) Demonstration of patients, including lectures, and recitations. During the year students are taken to the City and County Isolation Hospital, where from fifteen to twenty lepers, and such cases of variola and varicella, as are available, are demonstrated. So far as possible the microscopic and clinical aspects are studied simultaneously.
- (c) Practical clinical work. Students are trained in methods of taking histories, of making diagnoses, and of treatment of dermatological patients. They are also trained in the use of radiotherapy as applied to the diseases of the skin.

Fourth year, 2 hours a week, throughout the year.

## 2. Laboratory Diagnosis of Syphilis.

Dr. SCHMITT.

This includes the theory and technic of the serum diagnosis of syphilis by the Wasserman and Noguchi complement fixation reactions, and the Nonne and Noguchi butyric acid reactions, and demonstrations of the methods of finding the treponema pallida by smears, sections and the dark-field condenser.

Fourth year, 1 hour a week, throughout the year.

## 14. Lectures on Hygiene, Public Health, and Preventive Medicine.

Dr. FITZGERALD.

The course in Hygiene, Public Health, and Preventive Medicine is designed to meet the need of those who are to become medical practitioners. While fairly comprehensive in scope, it is not offered as a substitute for the especial training necessary to equip for positions as medical health officers. It does aim to emphasize the exact relations of the private practitioner to the Public Health. The scope of the course will include the following topics:

The legal mechanism for the control of disease, vital statistics, transmissible diseases and their epidemiology, occupational diseases, milk supply in relation to Public Health, water supply and sewage disposal, food supply, meat inspection, disinfection, economic cost of diseases, saving through conservation, etc.

Experts representing different branches of Public Health Work will cooperate so that each lecture will be given by some one particularly trained in the field covered.

Third year, 1 hour a week, throughout the year.

## 15. Materia Medica, Toxicology, Pharmacology and Therapeutics.

## 1. Pharmacology.

Dr. SIMMONS.

This course is purely practical, embraces the manufactures of preparations of the U. S. Pharmacopea and National Formulary: the art of prescribing and combining medicines, writing and dis-

dispensing prescriptions, considering the construction from the standpoint of solubility, active principles, physiological action, incompatibility, and vehicles.

This course will be given in the Pharmaceutical Laboratory in the Pharmacy College.

Laws governing the prescribing, dispensing and sale of narcotic and habit forming drugs, Pure Food and Drug and Poison Laws will be considered.

Third year, 2 hours a week, throughout the year.

2. *Materia Medica, Toxicology and Therapeutics.* Dr. SIMMONS.

This course includes a brief history of the use of remedial agents, the chemical, botanical and biological source of the substances used in the treatment of disease, their active principles, chief medicinal action, indication, contraindication, preparations and doses.

Toxicology is taken from the physician's point of view, the absorption and elimination of poisons, the physical signs and symptoms, effects, antidotes and treatments, the toxic and lethal doses.

Third year, 1 hour a week, throughout the year.

**DEPARTMENT OF SURGERY**

WALLACE I. TERRY, B.S., M.D., Professor of Surgery.  
 SAMUEL J. HUNKIN, M.D., Clinical Professor of Orthopedic Surgery.  
 HAROLD BRUNN, M.D., Instructor in Surgery.  
 WALTER SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.  
 CARL S. G. NAGEL, M.D., Instructor in Ophthalmology.  
 ALBERT J. HOUSTON, B.L., M.D., Instructor in Laryngology, Otology and Rhinology.  
 WILLIAM B. WILLARD, M.D., Instructor in Urology.  
 WILLIAM F. BLAKE, A.B., M.D., Instructor in Ophthalmology.  
 EDGAR W. ALEXANDER, B.S., M.D., Instructor in Ophthalmology.  
 DUDLEY TAIT, B.S., M.D., Assistant in Experimental Surgery.  
 CARL C. CRANE, M.D., Assistant in Orthopedic Surgery.  
 MARY E. BOTSFORD, M.D., Assistant in Surgery.  
 BENJAMIN THOMAS, M.D., Assistant in Laryngology, Otology and Rhinology.  
 LOUIS P. HOWE, M.D., Assistant in Surgery.  
 FREDERICK C. LEWITT, B.S., M.D., Assistant in Laryngology, Otology and Rhinology.  
 ANNA K. DAVENPORT, M.D., Assistant in Surgery.  
 STERLING BUNNELL, B.S., M.D., Assistant in Surgery.  
 SAXTON POPE, M.D., Assistant in Surgery.

Instruction in surgery is given during the third and fourth years at the University of California Hospital and the San Francisco Hospital (City and County Hospital). The general plan of instruction includes clinics, ward classes, demonstrations, recitations and laboratory exercises. Didactic lectures are given when necessary to supplement other means of instruction.

**1. Surgical Technic.**

Dr. BUNNELL.

A course designed to teach the students the fundamental principles of asepsis and antisepsis. The various methods of sterilization of hands, instruments, suture materials, dressings, etc., are tested, controlling the work by bacteriological studies.

Third year, 2 hours a week for 9 weeks.

**2. Surgical Physiology and Pathology.**

Dr. POPE.

Laboratory exercises and demonstrations. The students are taught the physiology of respiration, circulation, etc., as related to surgery. The process of repair on the different tissues are studied. Pathological specimens from the operating room and museum are utilized for demonstration and study. The class is divided into sections.

Third year, 2 hours a week for 9 weeks.

**3. Operative Surgery.**

Professor TERRY, Drs. BUNNELL and POPE.

The handling of instruments, suture materials, etc., are taught and applied in operations performed by the students. Case histories are given and discussed and the indicated operations done, particular attention being paid to careful technic. The class is divided into sections.

Third year, 2 hours a week for 18 weeks.

4. Surgical Clinic. Professor TERRY, Drs. BUNNELL and POPE.  
A clinical and conference course in general surgery in the operating room and in the wards of the University of California Hospital.  
Third year, 2 hours a week, throughout the year.
5. Surgical Out Clinic. Professor TERRY and Dr. POPE.  
This class is divided into sections and the students take histories and act as clerks and dressers under the supervision of assistants.  
Third year, 4 hours a week, throughout the year.
6. Surgical Clinics. Drs. BRUNN and HOWE.  
A clinical and conference course in general surgery in the operating room and in the wards of the San Francisco Hospital.  
Third year, 2 hours a week, throughout the year.
7. Surgical Wards. Professor TERRY, Drs. BUNNELL and POPE.  
The students are assigned classes in the wards and, under the direction of the assistants and house staff, they take histories, make physical and routine laboratory examinations, assist at operations and in the administration of anesthetics.  
Fourth year, 3 hours a week, throughout the year.
8. Surgical Clinic. Professor TERRY, Drs. BUNNELL and POPE.  
A clinical and conference course in general surgery in the operating room and in the wards of the University of California Hospital.  
Fourth year, 2 hours a week, throughout the year.
9. Surgical Clinic. Drs. BRUNN and HOWE.  
A clinical and conference course in general surgery in the operating room and in the wards of the San Francisco Hospital.  
Fourth year, 2 hours a week, throughout the year.
10. Orthopedic Surgery. Professor HUNKIN and Dr. CRANE.  
The course is entirely practical and is given in the out-patient department and in the wards at the University of California Hospital. The available clinical material is very abundant and of excellent variety. The diagnosis and treatment of diseases and injuries of joints, the correction of deformities and especially the subjects of skeletal alignment, strain and muscular balance are considered. Patients are assigned to each student who is expected to take the history after examination and make a diagnosis. The case is then discussed and treatment outlined. When the condition requires splints or braces, the student is taught the mechanical principles involved, and the art of application. When operation is advised the student is expected to follow the case into the operating room and assist in the procedure. In this manner the student is brought into close contact with the patient and is actually employed in remedying the patient's condition.  
Fourth year, 2 hours a week, throughout the year.
11. Laryngology, Otology and Rhinology. Drs. HOUSTON, THOMAS and LEWITT.  
Instruction in laryngology, otology and rhinology is given at the San Francisco Hospital, the University of California Hospital and at the Out-Patient Dispensary. The ambulatory cases are studied at the dis-

pensary, while the operative cases are demonstrated in the clinic at the University of California Hospital and the San Francisco Hospital.

1. Preliminary instruction in examination of patients is given in the wards of the San Francisco Hospital.

Third year, 1 hour a week, first semester.

2. Instruction in diseases of the ear, nose and throat is given in the clinics and wards of the University of California Hospital.

Fourth year, 2 hours a week, throughout the year.

## 12. Ophthalmology. Drs. FRANKLIN, NAGEL, BLAKE and ALEXANDER.

Instruction in ophthalmology is given in the wards and operating rooms of the University of California Hospital and the San Francisco Hospital and at the Out-Patient Dispensary.

### 1. Practical Work in the Physiological Laboratory.

In the second year students are instructed in the rudiments of physiological optics, including the theory of refraction, ophthalmoscopy, skiascopy, colors, etc., and in the physiology of the eye. This course is given in the department of physiology in Berkeley.

### 2. Ophthalmology Drs. FRANKLIN, NAGEL and BLAKE.

The subjects covered in this course comprise the methods of examining the patient and the external and ophthalmoscopic diseases of the eye; ophthalmic surgery. Special study is made of the eye in its relation to general diseases. Students of the fourth year have the opportunity of continuing clinical work in ophthalmology throughout the term, and perfecting themselves in the laboratory methods of examination of eye specimens.

Fourth year, 2 hours a week, throughout the year.

### 3. Ophthalmoscopy. Dr. ALEXANDER.

The third-year students are instructed in the bedside use of the ophthalmoscope, and the ocular conditions of patients in the medical wards are demonstrated.

Third year, 1 hour a week, throughout the year.

### 4. Dispensary Clinics. Drs. FRANKLIN, NAGEL, BLAKE and ALEXANDER.

Students are given facilities for personal examination and treatment of ambulatory cases in the out-patient department.

## 13. Urology.

### Genito-Urinary Surgery.

Dr. WILLARD.

This course is practical and is given in the University of California Hospital, San Francisco Hospital and at the Out-Patient Dispensary on ambulatory cases. It includes operative work, cystoscopy, ureteral catheterization and functional kidney tests.

Fourth year, 1 hour a week, clinic throughout the year.

1 hour a week, didactic throughout the year.

## 14. Radiography.

Dr. DAVENPORT.

This course covers a general outline of Radiography and Radiotherapy and will be made as practical as possible. It will be given at the University Hospital, and, in addition, interesting plates will be shown, from time to time, at the San Francisco Hospital.

Fourth year, 1 hour a week, throughout the year.

**DEPARTMENT OF GYNECOLOGY AND OBSTETRICS**

WILLIAM G. MOORE, M.D., Instructor in Gynecology.

LOUIS I. BREITSTEIN, B.S., M.D., Instructor in Obstetrics.

**GYNECOLOGY**

Instruction in gynecology is given during the third and fourth years. It is the aim of the department to train the students in those aspects of gynecology which relate to the general practice of medicine, while purely operative specialism is given secondary consideration.

1. Clinics in Gynecology.

Dr. MOORE.

This course is given upon the material in the wards of the San Francisco Hospital and the University of California Hospital. The clinic is combined with some bedside instruction. Cases are assigned to students, who are required to take their histories, conduct the physical examination, and make the diagnosis. When the case so assigned is brought into the clinic or the operating room, those students are called who have worked on the patient. In this manner the students are brought into close contact with the cases. In connection with this course instruction in operative gynecology is given upon the cadaver (Winkel's Manikin). Minor operations and those designed for the repair of the genital tract after obstetrical injuries are either demonstrated to the students or performed by them.

Fourth year, 2 hours a week, throughout the year.

2. Lectures in Gynecology.

Dr. MOORE.

A systematic course of lectures.

Fourth year, 1 hour a week, throughout the year.

3. Demonstrations in Gynecology.

Dr. MOORE.

A systematic course of lectures, combined with practical demonstrations illustrating the normal, gross and microscopic anatomy, pathology, and symptomatology. Especial emphasis is laid upon pathological work in this course.

Third year, 1 hour a week, throughout the year.

4. Dispensary Clinics.

Dr. MOORE.

In this course, held at the Out-Patient Dispensary, students are made familiar with ambulatory cases. As it is the purpose of the course to train the students in making physical examinations and in the use of instruments, the instruction is given in sections, and is entirely practical.

Fourth year, 18 hours for each section.

**OBSTETRICS**

1. (a) Recitations and Demonstrations.

Dr. BREITSTEIN.

This course covers the fundamental principles of obstetrics and closely follows Williams' text book. The students are assigned chapters to prepare for recitations. The course is illustrated by pathological specimens, models, charts and the projectoscope.

Third year, 2 hours a week, throughout the year.

## (b) Clinical Obstetrics.

Bedside instruction in the examination of normal pregnant women, including pelvimetry.

Bedside instruction in studying normal conditions of the puerperium and of the newborn.

Third year, 1 hour a week, throughout the year.

## 2. (a) Lectures and Demonstrations on selected topics.

Each lecture is complete in itself and treats of such conditions as placenta previa, eclampsia, etc., is illustrated by actual cases when possible and freely discussed with the students who have already had practical clinical experience.

Fourth year, 1 hour a week, throughout the first semester.

## (b) Clinical Obstetrics.

Beside instruction in the pathology of pregnancy, the puerperium and of the newborn.

Senior students will be called to assist at the various obstetrical operations as they arise.

Fourth year, 1 hour a week, during the second semester.

## 3. (a) Laboratory Course.

Actual work in the laboratory in examination of urine, blood, lochial secretions. Tissue pathology and microscopical examination of decidua, membranes, cord, placenta, etc. Examination of mother's milk, cow's milk, preparation of modified milk. Calculation of food formulae and caloric values.

## (b) Manikin practice in application of forceps, management of breech presentation, version, etc.

## (c) Hospital and Outside Service.

Each student for a period of two weeks during his junior year must give his entire time as assistant to the obstetrical interne. During this time in the *Hospital*, he makes morning and evening rounds in the wards for mothers and infants, assists the interne at deliveries of ward patients and witnesses operations. In his extra-mural service he visits and examines pregnant women at their homes, takes histories, makes complete ante-partum examinations, assists senior students at deliveries, visits during the puerperium and makes complete post-partum examinations at the time of discharge.

All this work is done under the supervision of competent instructors. In sections throughout third and fourth years.

At the end of the senior year each student must have witnessed or assisted at the delivery of ten women. In addition each student must have delivered personally, under an instructor, not less than five cases.

## MEDICAL JURISPRUDENCE

### Lectures.

A course of lectures upon the duties and rights of the medical witness, personal identification, malpractice, life insurance, death-bed declarations, signs of death, presumption of death, and the jurisprudence of insanity.

Fourth year, 1 hour a week, throughout the year.

**GRADUATES 1912**

Samuel Ellsworth Bailey, B.S.	San Francisco
Henry Chesley Bush, B.S.	San Francisco
Ernest Winton Cleary, M.S.	Lindsay
Linwood Dozier, B.S.	Oakland
Carl Leslie Hoag, M.S.	Ukiah
Frank Lewis Kelly, B.S.	Oakland
Herbert Everett Long, B.S.	San Francisco
Dewey Robert Powell, B.S.	Berkeley
Lionel David Prince, B.S.	San Francisco
Ellen Smith Stadtmüller, A.B.	San Francisco
Clifford Daniel Sweet, B.S.	Berkeley

**MATRICULATES, 1911-12**

*Fourth-Year Class*

Samuel Ellsworth Bailey, B.S.	San Francisco
Henry Chesley Bush, B.S.	San Francisco
Ernest Winton Cleary, M.S.	Lindsay
Linwood Dozier, B.S.	Oakland
Carl Leslie Hoag, M.S.	Ukiah
Frank Lewis Kelly, B.S.	Oakland
Herbert Everett Long, B.S.	San Francisco
Dewey Robert Powell, B.S.	Berkeley
Lionel David Prince, B.S.	San Francisco
Ellen Smith Stadtmüller, A.B.	San Francisco
Clifford Daniel Sweet, B.S.	Berkeley

*Third-Year Class*

Warren Barrett Allen	Berkeley
Daniel Irwin Aller, A.B.	Forest Grove, Oregon
Joseph Henry Catton	Berkeley
Earl Hamilton Cornell	Oakland
Selby Harold Marks, B.S.	Ukiah
Ruth Charlotte Risdon, B.S.	Oakland
Charles Lee Trauter, B.S.	Carson City, Nevada

*Second-Year Class*

Roy Charles Abbott	Pomona
Frank Stanley Baxter, B.S.	Oakland
Nathaniel Bercovitz, B.S.	Los Angeles
Hugh Kling Berkeley	Santa Monica
John Talmadge Boyer	San Francisco
Edward Cline Bull, B.S.	Marysville
Montague Cleaves	London, England
Esther Clarice Cumberland, B.S.	Los Angeles
Ruby Lacy Cunningham, B.S.	San Bernardino
Benjamin Marsh Frees	Monrovia
George Arneke Kretsinger, B.S.	Hayward
Alexander Thomas Leonard, A.B., B.S.	Menlo Park
Edna Locke	Eureka
Melville Hammond Long	San Francisco



'Kay Gustav Lorentzen, A.B. ....	San Francisco
Irene Amy Patchett, B.S. ....	Annapolis
George Warren Pierce .....	Pomona
Albert Holmes Rowe, B.S. ....	Oakland
Fred Nicholas Scatena .....	San Francisco

<sup>1</sup> In residence first half-year only.

### First-Year Class

'Thomas Daniel Callahan .....	San Francisco
Elton Ralph Charvoz .....	Santa Maria
Paul William Christman .....	Pasadena
'Hazel May Cotey .....	Los Angeles
'William Goodricke Donald .....	Berkeley
Henry Ehlers, B.S. ....	San Francisco
Abelson Epstein .....	San Francisco
Aaron Friedman .....	San Francisco
Justin Keyser Fuller .....	San Francisco
Clain Fanning Gelston .....	Hamilton
Ramon Augustus Gilbert .....	San Francisco
Lynn Newton Hart .....	Santa Rosa
Henry Leopold Holzberg, B.S. ....	San Francisco
William Robert Hume .....	Oakland
Harold Lund Jensen .....	Santa Cruz
William Francis John Kerr .....	Dorris
Fred Herman Kruse .....	Tulare
Alice Freeland Maxwell .....	San Francisco
Leon Walter Miner .....	Minneapolis, Minn.
'Frank Lee Niles .....	San Francisco
Jay Marion Read .....	San Francisco
John Morse Rehflsch .....	San Francisco
George Kremer Rhodes .....	San Diego
Agnes Julia Schol .....	Los Angeles
Homer Carlton Seaver, A.B. ....	Pomona
Robert Guy Sharp, B.S. ....	Otay
Emily Victoria Truman, Ph.B. ....	Berkeley
Cyrus Eugene Van Deventer .....	El Cusco
Albert Fabian Welin .....	Chicago, Ill.
Clarence Edgar Wells, B.S. ....	Visalia
John Homer Woolsey .....	Oakland

<sup>1</sup> In residence first half-year only.

**UNIVERSITY OF CALIFORNIA**  
**COLLEGE OF MEDICINE**

**ANNOUNCEMENT FOR 1913-14**

**BERKELEY**  
**UNIVERSITY OF CALIFORNIA PRESS**  
**1913**



## CALENDAR

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1913

August 4.—Undergraduate applications for admission to the Academic and Medical Departments, with credentials, should be filed with the Recorder of the Faculties at Berkeley on or before August 4. This may be done by mail.

August 7.—Academic year begins.

August 7-12.—Entrance examinations at Berkeley for freshman standing in the Academic Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before Wednesday, August 6. But applications for permits to be sent by mail should be made as far in advance of August 6 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

August 15, 16, 18, 9 a.m. to 12 m.—Office hours of the Dean at California Hall, Berkeley. Registration of first-year and second-year students in the Dean's office, California Hall.

August 18, 19, 10-12 a.m.—Registration of students of the third-year and fourth-year classes in the Dean's office in the main building of the Medical College in San Francisco.

August 19.—Class work begins.

November 27-29—Thanksgiving Recess.

December 15.—Christmas vacation begins.

1914

January 5.—Second half-year begins.

March 23.—Charter Day: a holiday.

April 27.—Examinations begin.

May 13.—Commencement Day.

## REGENTS OF THE UNIVERSITY

**NOTE.**—The regular meetings of the Regents are held at 2 p.m. on the second Tuesday of each month, except July, and on the day before commencement, at such places as may from time to time be determined, ordinarily at the San Francisco Institute of Art, California and Mason streets, San Francisco.

### REGENTS EX OFFICIO

His Excellency Hiram Warren Johnson  
Governor and *ex officio* President of the  
Regents  
Sacramento

His Honor Albert J. Wallace  
Lieutenant-Governor  
621 Union Oil bldg, Los Angeles

Clement C. Young, B.L.  
Speaker of the Assembly  
Shattuck av and Addison st, Berkeley

Hon. Edward Hyatt  
State Superintendent of Public Instruc-  
tion  
Sacramento

Hon. A. Lowndes Scott  
President of the State Agricultural  
Society  
Seventh and Townsend sts, San Fran-  
cisco

Livingston Jenka, A.B., LL.B.  
President of the Mechanics' Institute  
Mills bldg, San Francisco

Benj. Ide Wheeler, Ph.D., LL.D.  
President of the University  
California Hall, Berkeley

### APPOINTED REGENTS

The term of the appointed Regents is sixteen years, and terms expire March 1, of the year indicated in parentheses. The names are arranged in the order of original accession to the board.

Isaiah William Hellman, Esq. (1918)  
Wells, Fargo-Nevada National Bank,  
San Francisco

Mrs. Phoebe Apperson Hearst (1914)  
Pleasanton  
Business address: 410 Hearst bldg, San  
Francisco

Arthur William Foster, Esq. (1916)  
1210 James Flood bldg, San Francisco

Garrett William McEnerney, Esq. (1920)  
1277 James Flood bldg, San Francisco

Guy Chaffee Earl, A.B. (1918)  
233 Post st, San Francisco

James Wilfred McKinley, B.S. (1922)  
Rooms 432-437 Pacific Electric bldg.  
Los Angeles

John Alexander Britton, Esq. (1914)  
445 Sutter st, San Francisco

Frederick William Dohrmann, Esq. (1920)  
201 Geary st, San Francisco

Charles Stetson Wheeler, B.L. (1928)  
Nevada Bank bldg, San Francisco

William Henry Crocker, Ph.B. (1924)  
Crocker National Bank, San Francisco

Rudolph Julius Taussig, Esq. (1916)  
Main and Mission sts, San Francisco

Philip Ernest Bowles, Ph.B. (1922)  
427 California st, San Francisco

James Kennedy Moffitt, B.S. (1924)  
First National Bank, San Francisco

Charles Adolph Ramm, B.S., M.A., S.T.B.  
(1928)  
1100 Franklin st, San Francisco

Edward Augustus Dickson, B.L. (1926)  
Cr. Express-Tribune, 719 Hill st., Los  
Angeles.

OFFICERS OF THE REGENTS

His Excellency Hiram Warren Johnson  
President  
Sacramento  
Victor Hendricks Henderson, B.L.  
Secretary and Land Agent  
209 California Hall, Berkeley  
Isaiah William Hellman, Jr., Ph.B.  
Treasurer  
Union Trust Company, San Francisco

Warren Olney, Jr., A.B., LL.B.  
Counsel  
Merchants' Exchange bldg. San Fran-  
cisco  
Ralph Palmer Merritt, B.S.  
Comptroller  
220 California Hall, Berkeley

STANDING COMMITTEES OF THE BOARD OF REGENTS FOR THE YEAR 1913-14\*

*Finance:*

Regents Earl, Foster, Britton, Moffitt,  
Taussig, and as Member Emeritus,  
Regent Hellman.

*Grounds and Buildings:*

Regents Britton, Mrs. Hearst, Dohr-  
mann, Bowles, and C. S. Wheeler.

*Agriculture:*

Regents Scott, Foster, Dickson, Jenks,  
and Wallace.

*Medical Instruction:*

Regents Crocker, Moffitt, Dohrmann,  
Mrs. Hearst, and Dickson.

*Lick Observatory:*

Regents Ramm, McEnerney, Jenks,  
Young, and Crocker.

*Wilmerding School:*

Regents Taussig, Earl, and Moffitt.

*Scripps Institution for Biological Research:*

Regents McKinley, Wallace, and Hyatt.

*Executive Committee:*

This committee consists of the chairmen  
of all the other committees.

\*The President of the Board of Regents and the President of the University are *ex officio* members of all committees of the Board. In each committee the name of the chairman is first and the name of the vice-chairman second.

**FACULTY AND TEACHING STAFF\***

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**EMERITUS PROFESSORS**

ROBERT A. MCLEAN, M.D., Emeritus Professor of Clinical and Operative Surgery.

CHARLES A. VON HOFFMAN, M.D., Emeritus Professor of Gynecology.

THOMAS W. HUNTINGTON, A.B., M.D., Emeritus Professor of Clinical Surgery.

WILLIAM B. LEWITT, M.D., Emeritus Professor of Pediatrics.

**PROFESSORS**

HERBERT C. MOFFITT, B.S., M.D., Professor of Medicine.

FREDERICK P. GAY, A.B., M.D., Professor of Pathology.

WALLACE I. TERRY, B.S., M.D., Professor of Surgery.

— — —, Professor of Anatomy.

JOSIAH MORRIS SLEMONS, A.B., M.D., Professor of Obstetrics and Gynecology.

WILLIAM PALMER LUCAS, A.B., M.D., Professor of Pediatrics.

**CLINICAL PROFESSORS**

WILLIAM WATT KERR, A.M., C.M., M.B., Clinical Professor of Medicine.

HOWARD MORROW, M.D., Clinical Professor of Dermatology.

SAMUEL J. HUNKIN, M.D., Clinical Professor of Orthopedic Surgery.

**ASSOCIATE PROFESSORS**

SAMUEL STEEN MAXWELL, B.S., M.S., Ph.D., Associate Professor of Physiology.

†T. BRAILSFORD ROBERTSON, B.S., Associate Professor of Physiological Chemistry.

KARL FREDERICK MEYER, A.B., D.V.M., Associate Professor of Bacteriology and Protozoology.

**ASSISTANT PROFESSORS**

ROBERT ORTON MOODY, B.S., M.D., Assistant Professor of Anatomy.

GLANVILLE Y. RUSK, A.B., M.D., Assistant Professor of Pathology.

ARTHUR RUSSELL MOORE, Ph.D., Assistant Professor of Physiology.

JEAN V. COOKE, A.B., M.D., Assistant Professor of Pathology.

RICHARD W. HARVEY, M.S., M.D., Assistant Professor of Anatomy.

---

\* Voting members are those above the rank of instructor.

† On leave of absence.

LECTURER

A. A. D'ANCONA, M.D., Lecturer in Medical Jurisprudence.

INSTRUCTORS

HADYN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica.

HAROLD BRUNN, M.D., Instructor in Surgery.

THEODORE C. BURNETT, M.D., Instructor in Physiology.

GEORGE E. EBRIGHT, M.D., Instructor in Medicine.

HERBERT W. ALLEN, B.S., M.D., Instructor in Medicine.

WALTER SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.

RACHEL LEONA ASH, B.S., M.D., Instructor in Pediatrics.

WILLIAM G. MOORE, M.D., Instructor in Gynecology.

ALBERT J. HOUSTON, B.L., M.D., Instructor in Laryngology, Otology and Rhinology.

LIONEL S. SCHMITT, B.S., M.D., Instructor in Dermatology.

MILTON B. LENNON, A.B., M.D., Instructor in Neurology.

WILLIAM B. WILLARD, M.D., Instructor in Urology.

EDGAR W. ALEXANDER, B.S., M.D., Instructor in Ophthalmology.

LOUIS I. BREITSTEIN, B.S., M.D., Instructor in Obstetrics.

WILLIAM F. BLAKE, A.B., M.D., Instructor in Ophthalmology.

PHILIP T. SMITH, Ph.D., Instructor in Anatomy.

SAXTON T. POPE, M.D., Instructor in Surgery.

C. B. BENNETT, Ph.D., Instructor in Physiological Chemistry.

ARTHUR H. MORSE, A.B., M.D., Instructor in Obstetrics and Gynecology.

ASSISTANTS

ADELBERT W. LEE, M.D., Assistant in Dermatology.

DUDLEY TAIT, B.S., M.D., Assistant in Experimental Surgery.

RENÉ BINE, M.D., Assistant in Medicine.

JAMES LYMAN WHITNEY, A.B., M.D., Assistant in Medicine.

MARY E. BOTSFORD, M.D., Assistant in Surgery.

BENJAMIN THOMAS, M.D., Assistant in Laryngology, Otology and Rhinology.

CARL C. CRANE, M.D., Assistant in Orthopedic Surgery.

LEROY H. BRIGGS, M.D., Assistant in Medicine.

LOUIS P. HOWE, M.D., Assistant in Surgery.

FREDERICK C. LEWITT, B.S., M.D., Assistant in Laryngology, Otology and Rhinology.

STERLING BUNNELL, B.S., M.D., Assistant in Surgery.

ANNA K. DAVENPORT, M.D., Assistant in Surgery.

EUGENE S. KILGORE, B.S., M.D., Assistant in Medicine.

H. C. NAFFZIGER, M.S., M.D., Assistant in Surgery.



WALTER I. BALDWIN, B.S., M.D., Assistant in Orthopedic Surgery.  
C. R. CHRISTIANSEN, M.D., Assistant in Pathology and Bacteriology.  
J. B. FRANKENHEIMER, B.S., M.D., Assistant in Medicine.  
FRANK TOPHAM, M.D., Assistant in Obstetrics.  
IRENE A. PATCHETT, B.S., Assistant in Anatomy.  
GRACE F. GRIFFITHS, B.S., Assistant in Bacteriology.  
FREDERICK S. ZUMWALT, M.D., Assistant in Dermatology.  
FREDERICK EMERSON FOSTER, M.D., Assistant in Medicine.  
A. W. JOHNSON, A.B., M.D., Assistant in Otology, Rhinology and Laryngology.

---

#### VOLUNTARY ASSISTANTS

EDITH J. CLAYPOLE, Ph.B., M.S., M.D., Voluntary Research Assistant in Pathology.  
JOHN VAUGHAN LEONARD, M.D., Voluntary Clinical Assistant  
HERBERT S. THOMPSON, B.S., M.D., Voluntary Clinical Assistant.  
FREDERICK G. CANNEY, M.D., Voluntary Clinical Assistant.  
ABRAHAM GOTTLIEB, M.D., Voluntary Clinical Assistant.  
EDWARD H. JULIAN, M.D., Voluntary Clinical Assistant.  
HOWARD H. MARKEL, M.D., Voluntary Clinical Assistant.  
ALLEN E. PECK, A.B., M.D., Voluntary Clinical Assistant.  
ELLEN S. STADTMULLER, A.B., M.D., Voluntary Clinical Assistant.  
MILTON ABRAHAMSON, M.D., Voluntary Clinical Assistant.  
EDWARD TAUSSIG, M.D., Voluntary Clinical Assistant.  
EDWARD F. GLASSER, M.D., Voluntary Clinical Assistant.

**ADMINISTRATIVE OFFICERS**

BENJAMIN IDE WHEELER, LL.D., Ph.D., President of the University, ex-officio President of the Faculty.....	California Hall, Berkeley
HERBERT C. MOFFITT, B.S., M.D., Dean.....	
.....	University of California Hospital, San Francisco
J. C. ROWELL, A.B., M.A., Librarian.....	Doe Library Building, Berkeley
JAMES SUTTON, Ph.B., Registrar.....	California Hall, Berkeley
LIONEL S. SCHMITT, B.S., M.D., Secretary of the Faculty.....	
.....	University of California Hospital, San Francisco
— — —, Superintendent of the Hospital.....	
.....	University of California Hospital, San Francisco
GWENDOLIAN NEWELL, Assistant in charge of Social Service.....	
.....	University of California Hospital, San Francisco

**STANDING COMMITTEES OF THE MEDICAL FACULTY**

*Executive Committee*—President Wheeler, Prof. Moffitt, Prof. Gay, Prof. Terry, Prof. Kerr.

*Committee on Admissions and Premedical Work*—Prof. Moody (chairman), Prof. Maxwell, Dr. Brunn.

*Library Committee*—The Librarian of the University (Mr. Rowell), chairman, Prof. Robertson, Dr. Lennon.

*Committee on Students and Student Affairs*—Dr. Franklin (chairman), Dr. Allen, Dr. Burnett.

*Committee on Publicity*—Prof. Gay (chairman), Prof. Morrow, Dr. Ebright.

*Committee on Hospital Affairs (U. C. Hospital)*—Prof. Moffitt (chairman), Prof. Terry, Prof. Morrow.

*Committee on Hospital Affairs (S. F. Hospital)*—Prof. Kerr (chairman), Dr. Brunn, Dr. Moore.

*Committee on Out-Patient Department (U. C. Hospital)*—Dr. Pope (chairman), Dr. Willard, Dr. Blake.

The Dean and Secretary are ex officio members of all standing committees.

## MEDICAL STAFF, UNIVERSITY OF CALIFORNIA HOSPITAL

H. C. MOFFITT, M.D., Physician in Chief.

W. I. TERRY, M.D., Surgeon in Chief.

J. MORRIS SLEMONS, M.D., Obstetrician and Gynecologist in Chief.

F. P. GAY, M.D., Pathologist.	L. H. BRIGGS, M.D., Asst. Physician.
W. P. LUCAS, M.D., Pediatrician.	E. S. KILGORE, M.D., Asst. Physician.
H. MORROW, M.D., Dermatologist.	S. T. POPE, M.D., Asst. Surgeon.
S. J. HUNKIN, M.D., Orthopedic Surgeon.	STERLING BUNNELL, M.D., Asst. Surgeon.
J. V. COOKE, M.D., Asst. Pathologist and Director of Experimental Laboratory.	H. C. NAFFZIGER, M.D., Asst. Surgeon.
W. S. FRANKLIN, M.D., Ophthalmologist.	R. L. ASH, M.D., Asst. Pediatrician.
W. F. BLAKE, M.D., Ophthalmologist.	L. I. BREITSTEIN, M.D., Asst. Obstetrician.
W. G. MOORE, M.D., Gynecologist.	L. S. SCHMITT, M.D., Asst. Dermatologist.
A. J. HOUSTON, M.D., Otologist, Rhinologist and Laryngologist.	A. K. DAVENPORT, M.D., Radiographer.
M. B. LENNON, M.D., Neurologist.	MARY E. BOTSFORD, M.D., Anesthetist.
W. P. WILLARD, M.D., Urologist.	MARY KAVANAGH, M.D., Anaesthetist.
H. W. ALLEN, M.D., Asst. Physician.	— — —, Superintendent.
RENE BINE, M.D., Asst. Physician.	GWENDOLAN NEWELL, Asst. in charge of Social Service

## RESIDENT STAFF

CARL LESLIE HOAG, M.D., Resident Physician.

DANIEL I. ALLER, M.D., Interne.	LIONEL D. PRINCE, M.D., Interne.
EARL H. CORNELL, M.D., Interne.	RUTH C. RISDON, M.D., Interne.
SELBY H. MARKS, M.D., Interne.	CHAS. L. TRANTER, M.D., Interne.

Miss PERRY HANDLEY, Superintendent of Nurses.

## OUT-PATIENT DEPARTMENT, UNIVERSITY OF CALIFORNIA HOSPITAL

H. C. MOFFITT, M.D., Physician in Chief.

W. I. TERRY, M.D., Surgeon in Chief.

J. MORRIS SLEMONS, M.D., Obstetrician and Gynecologist in Chief.

*General Medicine*

J. L. WHITNEY, M.D., Physician in charge.
L. H. BRIGGS, M.D., Asst. Physician.
— — —, M.D., Asst. Physician.
— — —, M.D., Asst. Physician.
— — —, M.D., Asst. Physician.

*Dermatology*

H. MORROW, M.D., Dermatologist in charge.
L. S. SCHMITT, M.D., Dermatologist in charge.
A. W. LEE, M.D., Asst. Dermatologist.
F. S. ZUMWALT, M.D., Asst. Dermatologist.

*Neurology*

M. B. LENNON, M.D., Neurologist.

*Diseases of Children*

WILLIAM P. LUCAS, M.D., Physician in charge.  
R. L. ASH, M.D., Asst. Physician.

*General Surgery*

S. T. POPE, M.D., Surgeon in charge.  
H. C. NAFFZIGER, M.D., Asst. Surgeon.  
— — —, M.D., Asst. Surgeon.  
— — —, M.D., Asst. Surgeon.

*Ophthalmology*

W. S. FRANKLIN, M.D., Surgeon in charge.  
W. F. BLAKE, M.D., Surgeon in charge.  
*Otology, Laryngology, and Rhinology*  
A. J. HOUSTON, M.D., Surgeon in charge.  
BENJAMIN THOMAS, M.D., Asst. Surgeon.  
F. C. LEWITT, M.D., Asst. Surgeon.  
A. B. JOHNSON, M.D., Asst. Surgeon.

*Urology*

W. P. WILLARD, M.D., Surgeon in charge.

*Orthopedic Surgery*

S. J. HUNKIN, M.D., Surgeon in charge.  
C. C. CRANE, M.D., Asst. Surgeon.  
W. I. BALDWIN, M.D., Asst. Surgeon.

*Gynecology*

W. G. MOORE, M.D., Gynecologist.  
A. H. MORSE, M.D., Gynecologist.

*Obstetrics*

J. MORRIS SLEMONS, M.D., Obstetrician in charge.  
L. I. BREITSTEIN, M.D., Obstetrician.  
J. V. COOKE, M.D., Pathologist.  
A. K. DAVENPORT, M.D., Radiographer.  
GWENDOLAN NEWELL, Asst. in charge of Social Service.  
Miss HILDA SMITH, Nurse in charge.

MEDICAL STAFF, SAN FRANCISCO HOSPITAL

W. W. KERR, M.D., Physician in Chief.  
HAROLD BRUNN, M.D., Surgeon in Chief.

H. MORROW, M.D., Dermatologist.  
S. J. HUNKIN, M.D., Orthopedic Surgeon.  
W. P. LUCAS, M.D., Pediatrician.  
J. V. COOKE, M.D., Pathologist.  
W. G. MOORE, Gynecologist.  
A. J. HOUSTON, M.D., Otologist, Rhinologist and Laryngologist.  
M. B. LENNON, M.D., Neurologist.  
L. S. SCHMITT, Dermatologist.  
E. W. ALEXANDER, M.D., Ophthalmologist.

W. P. WILLARD, M.D., Urologist.  
L. I. BREITSTEIN, M.D., Obstetrician.  
GEO. E. EBRIGHT, M.D., Asst. Physician.  
J. B. FRANKENHEIMER, M.D., Asst. Physician.  
L. P. HOWE, M.D., Asst. Surgeon.  
H. C. NAFFZIGER, M.D., Asst. Surgeon.  
B. J. THOMAS, M.D., Asst. Otologist, Rhinologist and Laryngologist.  
FRANK TOPHAM, M.D., Asst. Obstetrician.

RESIDENT STAFF

WARREN HUNT, M.D., Interne.  
WARREN B. ALLEN, M.D., Interne.

JOSEPH H. CATTON, M.D., Interne.

**ADMISSION OF STUDENTS**

The medical college of the University of California, in common with the best medical schools of the country, requires a definite collegiate preparation for entrance into the medical curriculum, which is briefly as follows:

The student must present a Junior Certificate of this university or its equivalent. He must give evidence of sufficient training in physics, chemistry, and biology to enable him to pursue with profit the curriculum of the medical college, and should possess a reading knowledge of French or German. By a reading knowledge of French or German, two years of collegiate work or its equivalent is understood.

The following courses now offered may be regarded as representing the minimum of satisfactory preparation in the sciences named: Physics 2A, 2B, 3B or 4B; Chemistry 1A, 1B, 8A, 8B, 9; Zoology 1A, 5.

**BRIEF DESCRIPTION OF REQUIRED COURSES FROM THE UNIVERSITY OF  
CALIFORNIA ANNOUNCEMENT OF COURSES, 1913-14**

**PHYSICS****2A-2B, 4A-4B. General Physics.**

Professor LEWIS and Associate Professor RAYMOND.

Lectures with experimental illustration, recitations, and problems. Mechanics, properties of matter, heat, sound, light, energy, transformations, electricity, and magnetism.

**2A-2B. Lectures.**

Professor LEWIS.

3 hrs., throughout the year; 2 units each half-year. Tu Th S, 11.

The completion of this course admits students of the colleges of Engineering to course 1A; other students either to course 1A or to course 4A. No prerequisite.

**4A-4B. Recitations and Problems.**

Professor LEWIS and Associate Professor RAYMOND.

2 hrs., throughout the year; 2 units each half-year. W F, 9. Prerequisite: matriculation subject 11, or course 2A-2B. Some knowledge of elementary plane geometry is desirable.

**3A-3B. Physical Measurement.**

Assistant Professor MINOR.

Experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. Methods are selected so as to show instructive relations of physical principles, and their adaptation to practical problems. Laboratory

exercises twice a week. These courses are usually taken in conjunction with 2A-2B, 4A-4B. Prerequisite: matriculation physics, subject 11.

6 hrs., throughout the year; 2 units each half-year. Tu Th, 1-4.

## CHEMISTRY

### 1A-1B. General Inorganic Chemistry and Qualitative Analysis.

Three hours lectures and quiz, and four hours laboratory work, throughout the year; 5 units each half-year.

Lectures and Quiz.

Assistant Professor HILDEBRAND, Professor LEWIS, Assistant Professors BOOTH, BRAY and TOLMAN, Dr. BURKE, and Mr. ROSENSTEIN.

Two sections: M W F, 9; M W F, 10.

Laboratory.

Assistant Professors BOOTH and BRAY, Professor LEWIS, Assistant Professor HILDEBRAND, Dr. BURKE and Mr. ROSENSTEIN.

Four sections: I, M F, 1-3; II, Tu Th, 9-11; III, Tu Th, 1-3; IV, W, 1-3, S, 9-11. Prerequisite: matriculation chemistry, subject 12b. In special cases students who have credit for matriculation physics may be allowed to take this course without the chemistry prerequisite, but in no case without the written consent of the instructor.

### 3A-3B. Laboratory: General Chemistry and Qualitative Analysis.

This course is identical with the laboratory part of 1A-1B, is open only to those who have already taken the lecture course formerly known as 1A-1B, and will be abandoned after the year 1913-14.

### 8A-8B. Elements of Organic Chemistry. Assistant Professor BIDDLE.

An introductory study of the compounds of carbon. Recitations and lectures with experimental illustrations. Laboratory course 9 should, if possible, accompany this course.

2 hrs., throughout the year. Lectures, Tu Th, 8.

Fortnightly quiz, hour to be arranged, probably M or Tu, 4.

### 9. Elements of Organic Chemistry: Laboratory.

Assistant Professor BIDDLE.

A comparative experimental study of the physical properties and chemical reactions of the more commonly occurring classes of organic substances. Supplementary to course 8A-8B and open to all students pursuing that course. (Students in the college of Chemistry must enroll for three units in this course.)

6 to 9 hrs., either half-year- 2 to 3 units. M W, M F, or M W F, 1-4.

## ZOOLOGY

## 1A. General Zoology.

Professor KOFOID, Mr. STOREE, and Mr. McDONALD.

An introduction to the facts and principles of animal biology, with special reference to the evolution of animal life.

Lectures 2 hrs., demonstrations 4 hrs., first half-year; 4 units. Lectures Tu Th, 10. Demonstrations, four sections: I, M F, 2-4; II, Tu Th, 8-10; III, Tu Th, 2-4; IV, W, 2-4, S, 8-10.

Laboratory exercises are essentially illustrative of lectures and are based on the examination of living and prepared specimens, supplemented by models and charts.

## 5. Elementary Embryology.

Dr. LONG and Mr. CHANDLER.

8 hrs., second half-year; 4 units. Lecture Tu Th, 8; laboratory Tu Th S, 10-12. Prerequisite: course 1A.

In preparation for these studies it may be mentioned that high school physics and chemistry are necessary in order to enroll in the beginning university courses in the same subjects. Whereas these requirements as specified will be accepted for admission in the medical school, it should be pointed out that it is highly desirable that the student should not content himself with the acquisition of a Junior Certificate, but should take at least three years of college work, if possible. By this means, not only is more time offered for work in subjects of general culture outside the scientific requirements, but by a combined seven year course (three years as an undergraduate in the university and four years in the medical school) the two degrees of B.S. and M.D. may be obtained.

## THE COMBINED COURSE

Students in the Colleges of Letters, Social Sciences, or Natural Sciences who have received the Junior Certificate and who, in addition to the work of the Junior Certificate, have completed a full year of work in the Upper Division, may, at the beginning of their fourth or senior year in the University, register as students in the College of Medicine and, upon completion of the first year in the College of Medicine, may receive the degree of A.B., B.L., or B.S. Students who enter the College of Medicine in accordance with the foregoing provision will be expected normally to have completed 94 units of University work in the academic departments, including such work in major courses as may be acceptable to the faculty of the college in which the student proposes to take his academic degree.

Students taking the combined course should, in addition to the above required courses, elect work in some of the following departments: English, Philosophy, Economics, History, Political Science, Education, and Anthropology.

As additional subjects that may be pursued with advantage in the high school, may be mentioned beginning courses in French or German and a course in freehand drawing. It is further to be noted that, although the medical school makes no specified requirements in Latin, the state law governing the practice of medicine in California prescribes that every student shall give evidence of having passed a satisfactory examination in the elements of Latin grammar. To fulfill this requirement, it is suggested that the high school course should include two years of Latin.



## ORGANIZATION OF INSTRUCTION

## SESSION OF 1913-14

*Summary of Courses.* Instruction is divided into three classes: didactic, demonstrative, and practical. Under the head of didactic instruction are comprised lectures, recitations, and conferences. Under the head of demonstrative instruction are included demonstrations and clinics. Under the head of practical instruction are grouped all varieties of work which the students do for themselves—laboratory session, bedside study, and sectional dispensary work.

In accordance with the general custom in other colleges of the University, the courses in the medical sciences—Anatomy, Physiology, Physiological Chemistry, Pharmacology, Pathology and Bacteriology—are given a "unit" value, inasmuch as they may be elected, under certain conditions, by non-medical students, in the fulfillment of requirements for other degrees. In so far as the courses required for students aiming for the medical degree is concerned, these units are of no particular significance. The elective courses in these departments may, however, be taken by medical students in fulfilling requirements for a Master's degree, and the required courses may be counted in the combined course as fulfilling units for the B.S. degree, as well as part of the work for the M.D. degree.

In general, the University standard of a unit is sixteen hours of didactic teaching, or forty-eight hours of laboratory work. Demonstrative or clinical teaching occupies a middle ground of thirty-two hours.

Thirty-two units represent the work of the average year. Exceptional students can carry two to four units more, and are urged to elect them. So far as has been possible, the work has been concentrated.

Students may take advantage of the elective courses offered by the various departments mainly during the second semester of the fourth year.

Instruction extends through thirty-two weeks.

## CLASS STANDING AND EXAMINATION

For the determination of class standing and for advancement and graduation the results and markings of all studies and examinations conform to the procedures followed in the Academic Department of the University. The numerals 1, 2, 3 indicate that the student has passed in the first, second and third grade; 4 indicates condition; 5 failure.

Under the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations.

During or at the close of each academic year the following examinations are held:

*\*First Year.*—Histology, Systematic Human Anatomy, Physiology, Biochemistry.

*Second Year.*—Morbid Anatomy and Histopathology, Bacteriology, Infection and Immunity, Physiology, Topographical Anatomy, Pharmacology, Medical and Surgical Propedeutics.

*Third Year.*—Hygiene, Dietetics, Materia Medica and Toxicology, Therapeutics, Medicine, Surgery, Clinical Pathology, Pediatrics, Neurology, Dermatology and Syphilis, Ophthalmology, Obstetrics, Otology, Rhinology and Laryngology.

*Fourth Year.*—Therapeutics, Medicine, Pediatrics, Neurology, Medical Jurisprudence, Dermatology and Syphilis, Surgery, Orthopedic Surgery, Urology, Ophthalmology, Otology, Rhinology and Laryngology, Obstetrics, Gynecology, Roentgenology, and elected courses.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in

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*\* Beginning with the class entering in August, 1913, the curriculum is changed so as to cover the laboratory branches, with the exception of Pharmacology, by the end of the first semester of the second year, leaving two full years for the required clinical branches. The last semester of the graduating year will eventually be left free for elective courses either in the laboratory or clinical branches.*

one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of the departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for reëxamination at the beginning of the next academic year, or be required to repeat the course. The Faculty reserves the right to sever the connection of any student with the Medical College at any time for what it deems either mental or moral unfitness for a career in medicine.

### FEEES

The annual fee for tuition is \$150. A key and breakage deposit of \$25 in the first and second years and of \$10 in the third and fourth years is required for the use of lockers and to cover the cost of material used in laboratories and possible damage to college buildings and equipment. At the close of each session the unexpended balance is returned to the student.

In the first year there is an additional fee of \$15 for dissecting material, \$5 for each part; and in the third and fourth years a rental fee of \$5 is charged for a microscope.

The fees are payable at the time of matriculation. Students may pay one-half of the tuition fee at the beginning of each term.

## SCHEDULE OF STUDIES

## FIRST YEAR

	Hours per week	Total
<b>First Semester—</b>		
Histology .....	12	192
Anatomy .....	32	512
		<hr/>
		704
<b>Second Semester—</b>		
Neurology .....	5	80
Physiology .....	21	336
Biochemistry .....	16	256
		<hr/>
		672

## SECOND YEAR (1913-14)\*

<b>First Semester—</b>		
Physiology* .....	24	384
Neurology* .....	8	128
Pharmacology .....	6	96
Topographical Anatomy .....	4	64
		<hr/>
		672
<b>Second Semester—</b>		
Morbid Anatomy and Histopathology .....	14	224
Bacteriology .....	12	192
Infection and Immunity .....	6	96
General Medicine .....	4	62
General Surgery .....	2+	34
Materia Medica .....	1	16
		<hr/>
		624

## THIRD YEAR

<b>First Semester—</b>		
Hygiene .....	1	16
Dietetics .....	1	16
Clinical Pathological Conferences .....	2	32
Materia Medica, Toxicology and Pharmacy .....	3	48
Therapeutics .....	2	32
General Medicine .....	12+	195
Clinical Pathology .....	4	64
Pediatrics and Infectious Diseases .....	2	32
Neurology .....	1	16
General Surgery .....	10+	173
Obstetrics .....	6	96
		<hr/>
		720

\* There is an apparent duplication in the second and fourth years courses in 1913-14 owing to change in curriculum. See foot-note, p. 17.

	Hours per week	Total
Second Semester—		
Hygiene .....	1	16
Clinical Pathological Conferences .....	2	32
Materia Medica, Toxicology and Pharmacy .....	3	48
Therapeutics .....	1	16
General Medicine .....	9+	158
Clinical Pathology .....	2	32
Pediatrics and Infectious Diseases .....	2	32
Neurology .....	1	16
Medical Jurisprudence .....	1	16
Dermatology and Syphilis .....	2	32
General Surgery .....	6+	102
Ophthalmology .....	4	62
Otology, Rhinology and Laryngology .....	4	62
Obstetrics .....	6	96
		<hr/>
		720

## FOURTH YEAR (1913-14)\*

First Semester—		
Therapeutics* .....	2	32
General Medicine .....	8	128
Pediatrics and Infectious Diseases* .....	6+	102
Neurology* .....	4	64
Medical Jurisprudence* .....	2	32
Dermatology and Syphilis* .....	3	48
General Surgery .....	4	64
Orthopedic Surgery .....	3	46
Urology .....	3	46
Ophthalmology* .....	1	16
Otology, Rhinology and Laryngology* .....	1½	24
Obstetrics* .....	2	32
Gynecology .....	4	64
Roentgenology .....	1	16
		<hr/>
		714
Second Semester—		
Therapeutics .....	1	16
General Medicine .....	4	64
General Surgery .....	10	160
Obstetrics .....	3	48
Electives (minimum) .....	16	256
		<hr/>
		394

\* There is an apparent duplication in the second and fourth years courses in 1913-14 owing to change in curriculum. See foot-note, p. 17.

## HISTORY AND DEVELOPMENT OF THE SCHOOL

In 1862 Dr. H. H. Toland erected a building in the northern part of the city to serve as the nucleus of a medical school. This was subsequently known as Toland Hall and in 1872 was formally transferred to the Regents of the University of California as a department of the University. For many years the affiliation was merely nominal and the medical faculty was in entire control of the policy of the school, the support of the institution being derived from fees of the students.

In 1895 the course of instruction was changed from three to four years. In 1898 the school was moved to its present location on Parnassus Heights, a tract of land of thirteen and one-half acres donated to the University by the late Adolph Sutro. Funds were provided by the Legislature to erect buildings for law, medicine, dentistry and pharmacy, and at a later date the law building was transferred by the Board of Regents to the Medical School.

In 1902 the Board of Regents adopted a resolution of vital importance to the Medical School. Instead of preserving the former loose affiliation it was determined to regard the medical department as an integral part of the University. The properties of the school were transferred to the University, the student's fees were turned into the general University fund and support of the school was assumed by the Regents. The first two years of medicine were at once put upon an academic basis and suitable laboratories equipped.

With the destruction of the Out-Patient Department by the earthquake and fire of 1906 it became necessary to transfer the work of the first two years to Berkeley and to transform the main building of the school into a hospital and out-patient clinic. The separation of the scientific and clinical years proved, as was expected, a serious mistake, and in December, 1911, the Regents of the University announced their intention of bringing together the various departments of the school, of providing a proper modern teaching hospital and of placing the clinical years upon an academic basis.

On April 9, 1912, it was resolved to consolidate all departments of the school in San Francisco as soon as feasible. A recommendation of the President of the University was adopted which provided a plan of reorganization for the clinical years. Clinical instruction was divided into three main departments, medicine, surgery, and gynecology and obstetrics. Twelve thousand dollars were devoted to paying salaries in the clinical years.

As evidence of continued interest in the development of the clinical years the budget this year for salaries has been increased from \$12,000 to \$27,418. The Department of Obstetrics and Gynecology is now wholly upon an academic basis and a Professor of Pediatrics has been secured who devotes all his time to the school. The budget for the entire medical school reaches a total this year of \$149,898.

#### CLINICAL LABORATORIES AND HOSPITAL FACILITIES

The work of the first two years of the Medical Department is at present conducted at Berkeley. The work of the third and fourth years is carried on at the University Hospital, Second and Parnassus avenues, San Francisco. As soon as the new hospital is built all departments will be brought together in San Francisco.

During the past year a sum of \$25,000 has been expended by the University in fitting up and equipping permanent research laboratories in physiological chemistry and pathology. New equipment has been provided for the students' and internes' laboratories in the hospital, and special rooms have been furnished with polygraphs, a Cambridge cardiographic outfits, kymographs, etc., for the study of respiratory and cardiac pathology.

#### THE UNIVERSITY OF CALIFORNIA HOSPITAL

The desirability of a hospital directly under University control was long apparent but the earthquake and fire of 1906 made such a hospital an immediate necessity. Largely through efforts of certain members of the faculty, Drs. Thomas W. Huntington, Harry M. Sherman and A. A. D'Ancona, contributions were secured from a number of San Francisco citizens and a hospital equipment was installed in the main building of the Medical School. The hospital was opened April 11, 1907, and has been in active operation ever since. It is under complete control of the Board of Regents of the University.

On the first floor are the offices of administration, the hospital library, rooms for the resident staff and a nurses' dormitory. On the second floor is a well-equipped main operating room, an X-ray department, two small operating rooms, a clinical laboratory, and three wards devoted to medicine, surgery and gynecology. These wards contain sixty beds, and on the third floor is a ward of ten beds for obstetrical cases with an adjoining nursery and suitable delivery and isolation rooms. Children's wards on the third floor accommodate sixteen beds. Through the generosity of Mrs. Elise A. Drexler, a ward of four beds has been equipped and endowed for the treatment of cancer in women. Single rooms provide accommodations for 14 to 16 additional cases, the total capacity of the hospital being in the neighborhood of 110 beds. No private patients

are treated and the hospital material is available for teaching. By means of the endowment fund and the support of the University free beds are provided for the study of interesting and unusual cases. Patients in the Out-Patient Department who are found to need hospital attention can be transferred to the wards. Hospital material is now being drawn to a considerable degree from various points of the State, and it is aimed to make the University Hospital to some extent a consulting place for physicians at large, a place where patients unable to pay for costly examinations or expert opinions may be sent for further investigations, returning to their physicians with a report of the findings.

The ground floor of the building has been equipped with students' and clinical laboratories and has been divided into small rooms to meet the requirements of the Out-Patient Department. The growth of the Out-Patient Department during the past year has been so rapid as to necessitate further alterations which will be finished by August, 1913.

### 1913 THE NEW UNIVERSITY OF CALIFORNIA HOSPITAL

Plans are now being prepared for a modern hospital of two hundred beds to be erected on the present site to the west of the buildings now occupied by the hospital and school. Funds already subscribed have reached \$500,000, and it is proposed to start building by January 1, 1914. The Regents of the University have set aside \$3000 yearly as a salary for a hospital superintendent.

### SAN FRANCISCO HOSPITAL (Formerly City and County Hospital)

The San Francisco Hospital, temporarily located at the Almshouse tract and within walking distance of the University Hospital, assigns approximately one hundred beds (exclusive of tubercular wards) to the medical college of the University. These are equally divided for the instruction of clinical medicine and clinical surgery. A clinical laboratory for the use of the students and abundant post mortem material comprises the main features of the facilities afforded at this hospital.

The main buildings of the new San Francisco Hospital will be ready for occupancy about January 1, 1914. The tubercular and contagious pavilions will be finished at a later date. The main group, consisting of an executive building, service building, receiving and emergency building and sixteen wards, comprises, undoubtedly, one of the finest public hospitals in America, and represents the latest ideas in hospital construction and equipment. These wards will be devoted largely to acute medical and surgical cases, and will offer unexcelled opportunities for clinical work.



### LABORATORIES

Medical instruction of the first two years is carried on in the separate departmental buildings of Anatomy, Physiology and Physiological Chemistry, and Pathology and Bacteriology situated on the University Campus in Berkeley. The present laboratory buildings are regarded as temporary but are spacious and easily increased in size to meet growing demands; they are fully equipped not only for teaching but for research.

Instruction in pathology in its more practical relations to clinical medicine is pursued during the third and four year courses. A large separate experimental laboratory adjacent to the University Hospital provides space not only for this work, but also for instruction and research in experimental surgery and in physiological chemistry.

### LIBRARIES

Instruction in the medical sciences and the various branches of clinical medicine is incomplete without constant reference to current and authoritative monographic and periodical literature. In research work the need of a complete reference library is obvious.

Each of the laboratories in Berkeley—anatomy, physiology and physiological chemistry, pathology and bacteriology—contains a separate departmental library which, although a unit of the general University Library, is thus segregated as part of the working equipment of each department. Through the generosity of Mrs. Phoebe A. Hearst and Mrs. William H. Crocker, these departmental libraries are unusually complete; they also participate in the annual distribution of University Library funds.

The library in connection with the University Hospital contains a good collection of text-books and monographs, which is now being rapidly increased through a special annual appropriation. The best current journals in French, German and English are on file.

### THE SAN FRANCISCO MATERNITY

Arrangements have been made with the Board of Directors of the San Francisco Maternity for instruction in practical obstetrics to members of the third-year class. Each student is detailed to the out-patient service for a period of two weeks, during which time he makes examinations of pregnant women; attends with an interne, patients in labor and makes daily post-partum visits to the patient's home. Finally he examines women post-partum for discharge, reporting on the condition of both mother and baby. During the year between 250 to 300 patients are treated for the institution.

### ASSOCIATED CHARITIES AND SOCIAL SERVICE

Through arrangements with the Associated Charities and Fruit and Flower Mission, the medical clinics of these organizations have been abandoned and their medical work will in future be done by the University of California and Stanford University. A department of Social Service of the University Hospital is provided for in the Regent's budget. It will be in charge of Mrs. Newell, for many years in charge of such work for the Associated Charities and San Francisco Board of Health.

### HOSPITAL APPOINTMENTS

The position of interne in the University of California Hospital is open at present to six graduates of the University of California Medical School or other class A medical schools who recommend themselves to the Hospital Committee by their general fitness for the appointment. Internes serve for one year, either six months medicine and six months surgery, or special services of a year in pediatrics and obstetrics. After this year internes in the University Hospital will serve without compensation.

Internships in the San Francisco Hospital are awarded to three members of the graduating class upon the recommendation of the appropriate hospital committee of the faculty. Internships in some of the private hospitals in San Francisco are filled annually either upon recommendation of the Medical Faculty or by competitive examination.

At present there is room for one resident physician at the University Hospital. This position is open to a graduate of any class A medical school who shall have served at least one year as interne and who has shown especial fitness in his work. Next year this position will command a small salary and as soon as possible accommodations and salaries will be provided for residents in surgery, obstetrics, pediatrics and pathology.

THE GEORGE WILLIAMS HOOPER FOUNDATION FOR  
MEDICAL RESEARCH

In memory of her husband, George Williams Hooper, a pioneer citizen of San Francisco, Mrs. Hooper, on Commencement Day, May 14, 1913, transferred to the Regents of the University certain valuable property to serve as a foundation for an institute of medical research. The income at present provided is \$50,000 a year, but at the end of four years \$100,000 per annum will be available. The entire fund will be utilized in connection with the laboratories and hospital of the University and none of it will be spent upon buildings. The policy and work of the institution will be determined by the Board of Regents, assisted by an advisory board of seven members. The initial advisory board will consist of:

BENJAMIN IDE WHEELER, President of the University.

HENRY H. PRITCHETT, President of the Carnegie Foundation.

WILLIAM H. WELCH, Professor of Pathology, Johns Hopkins Medical School.

— — —, Regent of the University.

E. H. CONNELLY, San Francisco.

HERBERT C. MOFFITT, Dean of the Medical School.

— — —, Director of the Institute. (To be chosen by the Regents of the University upon recommendation of the Advisory Board.)

REQUIREMENTS FOR GRADUATION

1. The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years. He must give satisfactory evidence of possessing a good moral character, which includes unexceptional conduct while in the department.

2. He must have studied medicine four full years, and must have attended four regular courses in separate calendar years, the last of which must have been in the University of California.

3. He must have done the required work and passed the stated examinations.

4. He must have paid in full the college fees.

## FIRST YEAR

*First Semester*

	8:00-12:00	1:00-5:00
Monday	Histology	Anatomy
Tuesday	Anatomy	Anatomy
Wednesday	Histology	Anatomy
Thursday	Anatomy	Anatomy
Friday	Histology	Anatomy
Saturday	Anatomy	

## FIRST YEAR

*Second Semester*

	8:00-9:00	9:00-10:00	10:00-11:00	11:00-12:00	1:00-5:00
Monday	Physiology				Biochemistry
Tuesday	Physiology				Biochemistry
Wednesday	Physiology				Biochemistry
Thursday	Physiology				Biochemistry
Friday	Lecture, Neurology	Lecture, Biochemistry	Lecture, Physiology		Neurology
Saturday	Physiology				

## SECOND YEAR

This schedule represents work for the season of 1913-14 only. In 1914-15 it will be changed in accordance with the first year schedule on the preceding page, as explained in foot-note, p. 17.

*First Semester*

	8:00-12:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00
Monday	Physiology	Pharmacology	Topographical Anatomy (Sec. I)		
Tuesday	Physiology	Neurology	Topographical Anatomy (Sec. II)		
Wednesday	Physiology	Pharmacology			
Thursday	Physiology	Neurology			
Friday	Physiology	Pharmacology	Topographical Anatomy Sec. I.	Topographical Anatomy Sec. II.	
Saturday	Physiology				

## SECOND YEAR

*Second Semester*

	8:00-11:00		11:00-12:00	1:00-5:00	
Monday	Morbid Anatomy and Histopathology		Lecture. Immunology	Bacteriology and Immunology	
Tuesday	(Experimental Pathology: Elective)			Bacteriology and Immunology	
Wednesday	Morbid Anatomy and Histopathology		Lecture. Immunology	Bacteriology and Immunology	
Thursday	In San Francisco	9:00-10:00	10:00-1:00	2:00-3:00	3:00-4:00
		Medical Lectures and Demonstrations	Sections, Medical and Surgical	Elementary Surgery	Materia Medica
		MOFFITT		TERRY	SIMMONS
Friday	8:00-12:00			1:00-5:00	
	Morbid Anatomy and Histopathology			Bacteriology and Immunology	
Saturday	Morbid Anatomy and Histopathology				

# College of Medicine

## THIRD YEAR

### First Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Clinical Medicine MOFFITT	Medicine Lectures Demonstrations at S.F. Hospital KEER	Surgery Lectures Recitations Demonstrations TERRY	Medicine Lectures Demonstrations at S.F. Hospital KEER	Clinical Medicine MOFFITT	Surgery Lectures Recitations Demonstrations TERRY
9-10	Surgical Physiology and Pathology POPE	Medicine -Clinical Demonstrations EBRIGHT	Neurological Surgery NAFFZIGER	Surgery Clinical Demonstrations BRUNN	Surgical Technic BUNNELL	Hygiene —
10-12	Section Work Medical and Surgical	Section Work Medical and Surgical	Clinical Pathology BRIGGS and FOSTER	Section Work Medical and Surgical	Section Work Medical and Surgical	Clinical Pathology BRIGGS and FOSTER
12-1			Therapeutics KILGORE			Obstetrics SLEMONS
2-3	Pathological Conference COOKE	Obstetrics SLEMONS	Dietetics BINK	Obstetrics SLEMONS	Pathological Conference COOKE	Section Work hours Medicine .... 115 Surgery ..... 77
3-4	Pharmacy and Materia Medica SIMMONS		Obstetrics SLEMONS		Toxicology and Materia Medica SIMMONS	77
4-5		Pediatrics LUCAS	Neurology LENNON	Pediatrics LUCAS	Therapeutics KILGORE	193

## SECOND YEAR

This schedule represents work for the season of 1913-14 only. In 1914-15 it will be changed in accordance with the first year schedule on the preceding page, as explained in foot-note, p. 17.

*First Semester*

	8:00-12:00	1:00-2:00	2:00-3:00	3:00-4:00	4:00-5:00
Monday	Physiology	Pharmacology	Topographical Anatomy (Sec. I)		
Tuesday	Physiology	Neurology	Topographical Anatomy (Sec. II)		
Wednesday	Physiology	Pharmacology			
Thursday	Physiology	Neurology			
Friday	Physiology	Pharmacology	Topographical Anatomy Sec. I.	Topographical Anatomy Sec. II.	
Saturday	Physiology				

## SECOND YEAR

*Second Semester*

	8:00-11:00		11:00-12:00	1:00-5:00	
Monday	Morbid Anatomy and Histopathology		Lecture, Immunology	Bacteriology and Immunology	
Tuesday	(Experimental Pathology: Elective)			Bacteriology and Immunology	
Wednesday	Morbid Anatomy and Histopathology		Lecture, Immunology	Bacteriology and Immunology	
Thursday	In San Francisco	9:00-10:00	10:00-1:00	2:00-3:00	3:00-4:00
		Medical Lectures and Demonstrations	Sections, Medical and Surgical	Elementary Surgery	Materia Medica
		MOFFITT		TERRY	CLINICAL PHYSIOLOGY
Friday	8:00-12:00		1:00-5:00		
	Morbid Anatomy and Histopathology		Bacteriology and Immunology		
Saturday	Morbid Anatomy and Histopathology				

THIRD YEAR  
First Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Clinical Medicine MOFFITT	Medicine Lectures Demonstrations at S.F. Hospital KERR	Surgery Lectures Recitations Demonstrations TERRY	Medicine Lectures Demonstrations at S.F. Hospital KERR	Clinical Medicine MOFFITT	Surgery Lectures Recitations Demonstrations TERRY
9-10	Surgical Physiology and Pathology POPE	Medicine Clinical Demonstrations EBRIGHT	Neurological Surgery NAFFZIGER	Surgery Clinical Demonstrations BRUNN	Surgical Technic BUNNELL	Hygiene —
10-12	Section Work Medical and Surgical	Section Work Medical and Surgical	Clinical Pathology Briggs and FOSTER	Section Work Medical and Surgical	Section Work Medical and Surgical	Clinical Pathology Briggs and FOSTER
12-1			Therapeutics KILGORE			Obstetrics SLEMONS
2-3	Pathological Conference COOKE	Obstetrics SLEMONS	Dietetics BINE	Obstetrics SLEMONS	Pathological Conference COOKE	Section Work hours Medicine .... 115 Surgery ..... 77
3-4	Pharmacy and Materia Medica SIMMONS		Obstetrics SLEMONS		Toxicology and Materia Medica SIMMONS	193
4-5		Pediatrics LUCAS	Neurology LENNON	Pediatrics LUCAS	Therapeutics KILGORE	



**THIRD YEAR**  
*Second Semester*

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Clinical Medicine MOFFITT	Medicine Lectures Demonstrations at S.F. Hospital KERR	Surgery Lectures Recitations Demonstrations TERRY	Medicine Lectures Demonstrations at S.F. Hospital KERR	Clinical Medicine MOFFITT	Surgery Lectures Recitations Demonstrations TERRY
9-10	Surgical Physiology and Pathology POPE	Medicine Clinical Demonstrations EBRIGHT	Dermatology MORROW	Surgery Clinical Demonstrations BRUNN	Syphilis SCHMITT	Hygiene
10-11			Ear, Nose, Throat, Clinical Lectures HOUSTON			Eye, Aug-Oct. FRANKLIN BLAKE Ear, Nose, Throat Oct-Dec. HOUSTON
11-12	Section Work	Section Work	Clinical Lectures FRANKLIN BLAKE	Section Work	Section Work	Clinical Pathology BRIGGS and FOSTER
12-1			Therapeutics BINE			
2-3	Pathological Conference COOKE	Pediatrics LUCAS	Medical Jurisprudence D'ANCONA	Pediatrics LUCAS	Pathological Conference COOKE	Section Work hours Medicine ..... 78 Surgery ..... 38 Eye ..... 38 Throat ..... 38 192
3-4			Obstetrics SLEMONS		Obstetrics SLEMONS	
4-5	Pharmacy and Materia Medica SIMMONS	Obstetrics SLEMONS	Neurology Clinical Lectures and Recitations LENNON	Obstetrics SLEMONS	Toxicology, etc. SIMMONS	

## FOURTH YEAR

## First Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Clinical Medicine MOFFITT	Medicine Lectures Demonstrations at S.F. Hospital KEER	Surgery Lectures Recitations Demonstrations TERRY	Medicine Lectures Demonstrations at S.F. Hospital KEER	Clinical Medicine MOFFITT	Surgery Lectures Recitations Demonstrations TERRY
9-10	Urology Clinical Lectures WILLARD		Dermatology ROSENOW Syphilis SCHMITT		Dermatology MORROW	Ophthalmology Clinical Lectures FRANKLIN BLAKE
10-12	Section Work	Section Work	Section Work	Section Work	Section Work	Section Work
12-1	Gynecology Clinical Lectures MOORE	Neurology Clinical Lectures LENNON	Therapeutics KILGORE	Neurology Clinical Lectures LENNON	Gynecology Clinical Lectures MOORE	Pediatrics LUCAS
2-3	Surgical Ward Work	Medical Ward Work	Röntgenology Lectures and Demonstrations DAVENPORT	Medical Ward Work	Surgical Ward Work	Section Work hours Orthopedics... 30 Neurology... 32 Dermatology... 16 G. U. .... 30 Throat... 30 Gynecology... 32 Pediatrics... 54 224
3-4	Obstetrics SLEMONS		Pediatrics LUCAS		Obstetrics SLEMONS	
4-5	Pediatrics LUCAS	Medical Jurisprudence D'ANCONA	Orthopedic Surgery HUNKIN	Medical Jurisprudence D'ANCONA	Therapeutics KILGORE	

## FOURTH YEAR

## Second Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Clinical Medicine MOFFITT	Medicine Lectures Demonstrations at S.F. Hospital KERR	Surgery Lectures Recitations Demonstrations TERRY	Medicine Lectures Demonstrations at S.F. Hospital KERR	Clinical Medicine MOFFITT	Surgery Lectures Recitations Demonstrations TERRY
9-12	Elective	Elective	Elective	Elective	Elective	Elective
12-1			Therapeutics (Required) BINE			
2-5	Obstetrics SLEMONS	Surgical Ward Work	Elective	Surgical Ward Work 2 to 4	Surgical Ward Work	

## ANATOMY

— — —, Professor of Anatomy.

ROBERT ORTON MOODY, M.D., Assistant Professor of Anatomy.

RICHARD W. HARVEY, M.D., Assistant Professor of Anatomy.

PHILIP E. SMITH, Ph.D., Instructor in Anatomy.

IRENE A. PATCHETT, B.S., Assistant in Anatomy.

MABEL F. ARRINGTON, B.S., Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

## MICROSCOPIC ANATOMY

The various tissues and organs of the body are studied from the development point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting micro-

scope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens.

#### 101. Histology and Microscopic Organology.

Dr. SMITH and Miss ABBINGTON.

In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. The study is always comparative. The organs are discussed with reference to their form, arrangement, and the number of the fundamental tissues composing them, with special reference to their structural and functional relations to other organs. In each case the students begin their study with the structures in situ, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, 3 laboratory periods, 3 lectures a week, first semester. 6 units. M W F, 8-12.

#### 103. Neurology and the Sense Organs.

Assistant Professor HARVEY and Dr. SMITH.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in course 1 is used as the unit in the construction of the nervous system with a view of tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

First year, second semester; second year, first semester (1913-14 only). F, 8-9 and 1-5. 3 units.

#### 2. Histological Technique.

Mr. MILLER.

Designed for those wishing to further familiarize themselves with the general and special methods of obtaining, fixing, embedding, sectioning, staining, and mounting material for microscopical examination. The course is optional. It cannot be substituted for work required in the Medical Department. Hours to be arranged. Laboratory fee to cover cost of material, \$10.

**SYSTEMATIC HUMAN ANATOMY**

The laboratory method is largely used in giving the courses in systematic human anatomy, with occasional lectures and formal quizzes. An oral examination is required at the completion of the dissection of each part. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of the visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin-hardened sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

105. Head and Neck. Assistant Professors MOODY and HARVEY,  
Dr. SMITH and Miss PATCHETT.  
First year, first semester. Tu Th S, 8-12; M Tu W Th F, 1-5. 3½ units.
106. Arm and Thorax. Assistant Professors MOODY and HARVEY,  
Dr. SMITH and Miss PATCHETT.  
First year, first semester. Tu Th S, 8-12; M Tu W Th F, 1-5. 3½ units.
107. Leg and Abdomen. Assistant Professors MOODY and HARVEY.  
Dr. SMITH and Miss PATCHETT.  
First year, first semester. Tu Th S, 8-12; M Tu W Th F, 1-5. 3½ units.
108. Regional and Topographical Anatomy.  
Assistant Professors MOODY and HARVEY.  
Living models, special dissections and sections of the body are used in this course to enable the student to become more familiar with structural relations and to assemble information obtained in preceding dissections.  
Second year, first semester. Sec. I, M 2-5, F 2-3; Sec. 2, Tu 2-5, F 3-4. 3 units.
109. Special Anatomy for Physicians and Advanced Students.  
Assistant Professors MOODY and HARVEY.  
Hours to be arranged to suit applicants.

## GRADUATE COURSES

## 210. Research.

Assistant Professors MOODY and HARVEY and Dr. SMITH.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of members of the staff. The course also gives opportunity for those wishing to gain experience in special Histological Technique and in the construction of papers for publication. If the results obtained merit it, they will be published. To cover the cost of material expensive to obtain, chemicals, etc., a laboratory fee of \$5 will be charged. Hours optional.

## 211. Journal Club.

Reviews of current anatomical literature will be presented by the students and discussed informally. This course will be open to all students but the membership will be limited in number. Those wishing to join should consult Professor Moody.

One hour a week, second semester.

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**PHYSIOLOGY**

SAMUEL STEEN MAXWELL, Ph.D., Associate Professor of Physiology.

\*T. BRAILSFORD ROBERTSON, Ph.D., Sc.D., Associate Professor of Physiological Chemistry.

ARTHUR RUSSELL MOORE, Ph.D., Assistant Professor of Physiology.

THEODORE C. BURNETT, M.D., Instructor in Physiology.

C. B. BENNETT, Ph.D., Instructor in Physiological Chemistry.

OTIS O. A. SHARP, Assistant in Physiology.

L. R. BEAUCHAMP, Technical Assistant.

The required courses are 103, 104 and 106. The remaining courses are open to those students who have the time and the preparation necessary to pursue them with profit.

Attention should be called to the fact that the equipment of the department offers unusual opportunities for research both in the Rudolph Spreckels Laboratory at Berkeley and in the Herzstein Research Laboratory at New Monterey.

The equipment in the Rudolph Spreckels Physiological Laboratory comprises in addition to the apparatus and conveniences for the customary lines of work in mammalian physiology ample facilities for research in physiological chemistry and experimental biology. The department library contains complete sets of all the important physiological journals, and the more important monographs on physiological and related subjects. The Herzstein Research Laboratory at New Monterey offers facilities for the investigation of problems in marine biology.

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\*Absent on leave, 1913-14.

## 103. Biochemistry.

Dr. BENNETT.

In this course the foodstuffs are followed up from the moment that they are ingested to the moment when, after having circulated through the tissues and shared in their life, their final products are excreted from the body. The course may be considered as consisting of six parts, corresponding with various phases of the cycle of changes which the foodstuffs undergo. These divisions of the course are the following:

1. The foods; their properties, assimilation, and conversion into living matter or into reserve materials. The consideration of this phase of the subject takes the student to the point at which the foods have really become living matter or reserve-materials. This leads naturally to the second part of the subject, namely:

2. The manner in which the physical and chemical properties of the foods determine the properties of living protoplasm.

3. The correlation of the different activities of the tissues in so far as this is brought about by chemical agents which are distributed through the agency of the circulation.

4. The chemical phenomena which accompany or underlie the performance of function by living tissues.

5. The waste-products, their chemical nature, their derivation, and, to some extent, the method of excretion.

6. Regarding the entire body as a chemical machine, the efficiency of this machine is discussed and the relationship between the work it can perform and the nature of the fuel with which it is supplied.

First year, second semester. Lectures, M Tu W Th 1-2, F, 9-10; laboratory. M Tu W Th, 2-5. 9 units.

## 104. Physiology.

Associate Professor MAXWELL, Assistant  
Professor MOORE, and Dr. BENNETT.

The physiology of nerve, muscle, central nervous system, sensation, circulation, respiration and secretion. The lectures cover in a systematic way the general subject-matter of the topics stated above. Laboratory experiments are so arranged that the most important fundamental observations are repeated. Attention is given to technique as well as to results. Continual use of the reference library is insisted upon. In addition to the routine work required alike of all students, each member of the class is required to demonstrate some special piece of experimental work; the demonstration is accompanied by a paper by another student on the subject which the demonstration illustrates, and each of the two hands in a carefully prepared bibliography. Thus each student is responsible for one demonstration, one paper, and two bibliographies.

First year, second semester. Lectures, M Tu W Th S, 11-12; laboratory, M Tu W Th S, 9-12. (This course will be repeated for second-year class in 1913 in first semester owing to change in curriculum; see schedule.)



## 106. Pharmacology.

Dr. BURNETT.

The physiological action of the drugs, with illustrations derived from their therapeutic application, and practical demonstrations.

Second year, first semester. M W F, 1-2; laboratory, W, 2-5. 4 units.

## ELECTIVES

## 110. Experimental Biology.

Assistant Professor MOORE.

Special problems in regeneration and the tropisms. Open to properly qualified students.

Hours and credits by arrangement.

## 111A. Advanced Physiology.

Associate Professor MAXWELL.

Some simple piece of research is repeated and extended in connection with a study of the original literature on the subject. Open to a few suitably prepared students.

Laboratory three afternoons a week, with occasional lectures and conferences. 4 units.

## 111B. Advanced Chemical Biology.

Associate Professor ROBERTSON.

Special topics may be selected by the student in conference with the professor as subjects of advanced and intensive study.

## GRADUATE COURSES

## 212. Research in Physiology.

Associate Professor MAXWELL.

Hours and credits by arrangement.

## 213. Research work in Physiological Chemistry.

Associate Professor ROBERTSON.

Open to students who have the necessary time at their disposal and who have the necessary training. The subject of the research and the time to be devoted to it to be arranged in conference with Professor Robertson.

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**PATHOLOGY AND BACTERIOLOGY**

FREDERICK P. GAY, A.B., M.D., Professor of Pathology.

KARL F. MEYER, A.B., D.V.M., Associate Professor of Bacteriology and Protozoology.

GLANVILLE Y. RUSK, A.B., M.D., Assistant Professor of Pathology.

JEAN V. COOKE, A.B., M.D., Assistant Professor of Pathology and Director of the Laboratory of Animal Experimentation.

GRACE F. GRIFFITHS, B.S., Assistant in Bacteriology.

C. R. CHRISTIANSEN, M.D., Assistant in Bacteriology and Pathology.

EDITH J. CLAYPOLE, Ph.B., M.S., M.D., Voluntary Research Assistant in Pathology.

The fees of medical courses, when taken by those not registered in the College of Medicine, will be \$10 for each course, with an additional deposit of \$5, which will be returned, less deduction for breakage, at the end of the half-year. The fees for research courses will be arranged in accordance with the scope of the work and the material required.

Instruction in pathology and bacteriology is given in the Hearst Laboratory of Pathology and Bacteriology in Berkeley during the second year and at the University of California Hospital and the San Francisco Hospital during the third and fourth years.

The course in pathology aims to outline the natural history of disease. The instruction is for convenience divided into three correlated courses dealing respectively with causation, progress and effect.

101. Bacteriology and Protozoology.

Associate Professor MEYER and Miss GRIFFITHS.

Bacteriological methods are first taught; the preparation of culture media, the isolation of bacteria in pure culture, and the morphology and cultural characteristics of bacterial species. The pathogenic bacteria are then taken up in relation to specific diseases. The lower animal parasites concerned in systemic diseases are then considered. Lectures are employed for outlining general principles, the work being largely practical.

12 hrs., afternoons, alternating with course 102, second half-year.  
4 units.

102. Infection and Immunity. Professor GAY and Miss GRIFFITHS.

The course presents the most accessible aspects of functional pathology. It traces the evolution of infectious diseases in the body and the mechanism of animal defense. Experimental methods of studying infection are demonstrated and so far as practicable carried out by the student. A systematic course of lectures will outline the principles of immunology with a consideration of their applicability in the diagnosis and treatment of disease. These lectures, but not the laboratory work, may be taken by non-medical students who have had at least course 1 or 2.

Laboratory 4 hrs., afternoons, alternating with course 101. 3 units.  
Lectures, M W and occasionally F, at 11.

103. Morbid Anatomy and Histopathology.

Assistant Professor RUSK and Dr. CHRISTIANSEN.

The organ and tissue changes in diseases in the animal and particularly in the human body will be studied in this course. Macroscopic lesions will be illustrated by fresh material from autopsies and museum specimens, and the microscopic appearances will be studied by means of a loan collection of prepared slides. Experimental lesions are used to emphasize the evolution of such processes. The course includes systematic instruction in the conduct of autopsies at the Alameda County Hospital at which the students assist in small groups. This course, while largely practical, is considered systematically in lectures and conferences.

## 104. Experimental Pathology.

Assistant Professor RUSK and Dr. CHRISTIANSEN.

An elective course to which a limited number (not over six) especially qualified students will be admitted. Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alterations will be undertaken and the results demonstrated to those in Pathology 103, which latter course it is intended to supplement. Special problems may also be undertaken. This course may also be taken as a graduate course by special arrangement.

## 105. Autopsy Course.

Assistant Professor COOKE.

During the third and fourth years an autopsy course is conducted in the University of California Hospital and the San Francisco Hospital.

## 106. Pathological Conferences.

Assistant Professor COOKE.

Third year, 2 hrs., throughout the year.

## GRADUATE COURSES

## 201. Research. Problems of Infection and Immunity. Professor GAY.

Either half-year. Hours and units to be arranged.

## 202. Research. Neuropathology.

Assistant Professor RUSK.

Either half-year. Hours and units to be arranged.

## 203. Research. Bacteriology and Protozoology.

Associate Professor MEYER.

The investigation of concrete problems suggested by the work in medical bacteriology.

Either half-year. Hours and units to be arranged.

## 204. Advanced Morbid Anatomy and Histopathology.

Assistant Professor COOKE.

An elective course for fourth year and graduate students in medicine, comprising autopsy technic and the working up of tissue and cultures resulting from post mortem examinations.

University of California Hospital. Hours and units to be arranged.

**DEPARTMENT OF MEDICINE**

The Department of Medicine includes Pediatrics, Neurology  
and Dermatology.

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**GENERAL MEDICINE**

HERBERT C. MOFFITT, B.S., M.D., Professor of Medicine.  
WILLIAM WATT KERR, A.M., C.M., M.D., Clinical Professor of Medicine.  
HADYN M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica.  
GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
HERBERT W. ALLEN, B.S., M.D., Instructor in Medicine.  
RENÉ BINE, M.D., Assistant in Medicine.  
JAMES LYMAN WHITNEY, A.B., M.D., Assistant in Medicine.  
LEROY H. BRIGGS, M.D., Assistant in Medicine.  
EUGENE S. KILGORE, B.S., M.D., Assistant in Medicine.  
JULE B. FRANKENHEIMER, M.D., Assistant in Medicine.  
HARRY E. FOSTER, M.D., Assistant in Medicine.

Instruction is given at the San Francisco and University of California  
Hospitals and is largely clinical.

**INSTRUCTION AT THE SAN FRANCISCO HOSPITAL**

**101-112. Clinical Medicine.**

**Professor KERR.**

This course consists of clinics, clinical conferences, lectures and  
demonstrations upon the material in the medical wards of the San  
Francisco Hospital. Students are assigned to the beds for study  
of individual cases.

Third year, twice a week, throughout the year. 64 hours.

Fourth year, twice a week, throughout the year. 64 hours.

**102. Bedside Instruction.**

**Professor KERR, Drs. EBRIGHT and FRANKENHEIMER.**

The class is divided into sections of not more than six. The students  
are required to take histories, to examine patients and to discuss  
problems of differential diagnosis. They do laboratory work under  
proper supervision.

**103. Clinical Demonstrations.**

**Dr. EBRIGHT.**

First and second semester, once a week. 32 hours.

## INSTRUCTION AT THE UNIVERSITY OF CALIFORNIA HOSPITAL

During the last semester of the second year all students come over from Berkeley to the University of California Hospital one entire day each week for instruction in medicine and surgery.

In medicine two general introductory courses will be given with an idea of bridging the gap between the purely scientific and clinical years. One hour a week will cover the necessary chapters of *Materia Medica* so that the students, already trained in Pharmacology, will be prepared to begin Therapeutics in the third year. Chief stress, however, will be laid upon instruction in history taking and physical diagnosis, and an endeavor will be made to drill the student thoroughly at the very beginning in what may be termed a standard medical technic. This uniform technic in history taking, in recording physical and laboratory examinations will be applied in all the student's later dispensary and ward exercises and will be carried even farther into his work as clinical clerk and interne in the hospital.

## 104. Propedeutics of Medicine.

Professor MOFFITT.

Great emphasis will be laid upon cultivation of the student's power to observe. Obvious clinical phenomena or typical pictures of disease will be demonstrated at the beginning of the course, such as jaundice, pigmentation, cyanosis, edema, ascites, anemia, myxedema, Basedow's disease, tumors, peculiar gaits. Later on important symptoms as dyspnoea, vomiting, cough, pain, polyuria, etc., will be considered, with special reference to their physiological interpretation. Still later cases will be demonstrated (particularly cases of nervous disease, paralysis, muscle atrophies, disturbances of reflexes, brain tumors) that will serve to show the student direct application of his anatomical and physiological knowledge to the clinic.

## 105. Physical Diagnosis and History Taking.

Drs. BINE, WHITNEY, KILGORE, and BRIGGS.

A few lectures on the method of history taking and on certain general chapters of physical diagnosis will be delivered to the entire class. Practical exercises in the wards and Out-Patient Department will be given to sections of not more than six. Cabot's *Physical Diagnosis* and Sahli's *Untersuchungsmethoden* will serve as textbooks.

## 106. Clinical Physiology.

Dr. KILGORE.

Lectures, recitations and demonstrations. The object of these exercises is to point out at the beginning of the student's clinical experience some of the more direct practical applications of physiology. Special emphasis is laid upon those facts which have been learned by personal laboratory experimentation. Cases are discussed which show simple nerve lesions and the student is led to analyze them by use of knowledge already obtained. In a similar manner disorders of cardiac mechanism, hemodynamics, respiration, digestion, etc., are considered.

107. Clinical Medicine.

Professor MOFFITT.

Lectures, demonstrations, ward visits and quizzes. All important diseases will be illustrated, as far as possible, by suitable cases during the course of the two years' instruction. Interesting patients seen by the students in the Out-Patient Department can be taken into the wards and more carefully studied. During the coming year infectious diseases and diseases of the circulatory and nervous systems will receive special attention.

108. Section Work in Wards and Out-Patient Department.

Drs. BINE, WHITNEY, KILGORE, and BRIGGS.

Practical work in history taking and physical diagnosis to supplement the courses of the second year. Stress is laid upon the careful preparation of case records according to the form prescribed for use by internes in the University Hospital.

109. Clinical Pathology.

Drs. BRIGGS and FOSTER.

Training in laboratory methods of chief service in the clinic. The student is taught to use in an efficient way knowledge already gained in his courses in physiology and pathology. Examinations are made of blood, urine, sputum, stomach contents, feces and of ascitic, pleural and cerebrospinal fluids. The material is derived from the wards and Out-Patient Department in which the student is at work in the medical sections so that emphasis can be laid upon correlation of clinical and laboratory findings. Microscopes and blood counting outfits are supplied each student, although it is most advisable that they possess their own. Slides, cover-slips, forceps, etc., they provide themselves.

110. Therapeutics.

Drs. KILGORE and BINE.

Lectures, recitations, demonstrations and practical exercises on the medical treatment of disease. By the use of material in the wards, emphasis is placed upon the application of therapeutic principles. Students are required to write specific directions for patients and for nurses and to execute many of the orders themselves. Comparatively few drugs are used. These occupy an important but by no means exclusive place in the teaching. Special attention is given to biologic methods, to diet, hydrotherapy, massage and other physical and mechanical measures.

111. Dietetics.

Dr. BINE.

A short course will be given on the physiology of nutrition and on the digestibility and nutrient values of the different foods, including the analysis of standard dietaries. Special attention will be paid to the use of foods in the treatment of nephritis, diabetes, nephrolithiasis, gout, obesity, undernourished states as well as to rectal feeding and the use of artificial foods. The practical application of these methods will be illustrated by the treatment of these diseases in the hospital wards, the senior students charting and keeping track of the diets in all cases. The dietetic treatment of such gastro-intestinal diseases as hyperacidity, anacidity, gastric ulcer, constipation, intestinal putrefaction will also be illustrated by ward cases.

## 114. Clinical Ward Exercises and Case History Taking.

Drs. WHITNEY and Dr. BRIGGS.

Medical cases in the wards are assigned to the senior students. The student puts into practical use the knowledge gained in the third year in methods of history taking, physical and laboratory examinations, and differential diagnosis. The cases are worked up and recorded independently of the hospital records, handed in to the instructor and discussed informally.

## SECOND YEAR

## 104. Propedeutics of Medicine.

Professor MOFFITT.

Once a week, second semester. 16 hours.

## 105. Physical Diagnosis and History Taking.

Drs. BINE, WHITNEY, KILGORE, and BRIGGS.

Once a week, second semester. Section work each student. 62 hours.

## 106. Clinical Physiology.

Dr. KILGORE.

Once a week, second semester.

## THIRD YEAR

## 107. Clinical Medicine.

Professor MOFFITT.

Twice a week, first and second semesters. 64 hours.

## 108. Section Work.

Drs. BINE, WHITNEY, KILGORE, and BRIGGS.

(a) Each student, first semester. 115 hours.

(b) Each student, second semester. 78 hours.

## 109. Clinical Pathology.

Drs. BRIGGS and FOSTER.

First semester, two periods 2 hours each. 64 hours.

Second semester, one period 2 hours each. 32 hours.

## 110. Therapeutics.

Drs. KILGORE and BINE.

Twice a week, first semester. 32 hours.

Once a week, second semester. 16 hours.

## 111. Dietetics.

Dr. BINE.

Once a week. 16 hours.

## FOURTH YEAR

During 1913-14 the following courses will be given to the fourth-year class:

## 112. Continuation of course 101.

Professor KERR.

Twice a week, first and second semesters. 64 hours.

## 113. Continuation of course 107.

Professor MOFFITT.

Twice a week, first and second semesters. 64 hours.

## 114. Clinical Ward Exercises and History Taking.

Drs. WHITNEY and BRIGGS.

Twice a week, first semester. 64 hours.

For electives in fourth year, see p. 58.

**PEDIATRICS**

WILLIAM PALMER LUCAS, A.B., M.D., Professor of Pediatrics.

R. L. ASH, B.S., M.D., Instructor in Pediatrics.

**THIRD YEAR****101. Lectures and Recitations.**

Professor LUCAS.

The material for instruction is drawn from the children's wards of the University Hospital, San Francisco Hospital (November to May), and the Isolation Hospital (by the courtesy of the San Francisco Board of Health and Dr. A. A. O'Neil). The course will consist of lectures and clinical exercises dealing with the normal development of the infant, normal breast feeding, substitute feeding, dietetics of early life, and the various diseases met with in childhood. Special attention will be paid to the gastrointestinal diseases, contagious diseases, systemic diseases, and so forth. Clinical work will depend on the material at hand in the wards.

Twice a week for two semesters. 64 hours.

**FOURTH YEAR**

During 1913-14, on account of a change in curriculum, the following courses will be offered:

**102. Lectures, Clinical Exercises, and Out-Patient Work, with laboratory exercises in connection with the cases seen in the wards or Out-Patient Department.**

Professor LUCAS.

Material will be drawn from the children's wards of the University Hospital, San Francisco Hospital (November to May), and the Isolation Hospital (by courtesy of the San Francisco Board of Health and Dr. A. A. O'Neil). The course will consist of lectures, clinical exercises, and out-patient work, with laboratory exercises in connection with the cases seen in the wards or Out-Patient Department. The clinical ground covered will depend on the type of cases in the wards and Out-Patient Department. There will be a systematic course of lectures on the normal development of the infant, and the physiology of digestion and the common types of indigestion, with special attention to dietetics, breast feeding, and substitute feeding, the nutrition problems of infants and childhood, and the diseases met with in childhood. There will also be instruction in laboratory methods such as the analysis of milk, study of stools, and the examination of spinal fluid and blood as it appears in the conditions peculiar to childhood. The amount of bedside work will depend on the number of cases available for clinical teaching.

First semester, three times a week. 48 hours.

**103. Section Work.**

Classes will be divided into small sections for work in the Out-Patient Department and in the wards.

First semester, each student. 54 hours.



**NEUROLOGY**

MILTON B. LENNON, A.B., M.D., Instructor in Neurology.

**THIRD YEAR****101. Clinical Neurology.**

Dr. LENNON.

A review of the anatomy and physiology of the nervous system, with the practical application of the same on clinical cases. In this course the methods of neurological examination will be exemplified and a thorough explanation of the elicited phenomena will be given.

First semester, once a week. 16 hours.

**102. Neuropathology.**

Dr. LENNON.

Demonstration of pathological sections of the brain and cord, with a discussion of the same.

Second semester, once a week. 16 hours.

**FOURTH YEAR**

During 1913-14, on account of a change in curriculum the following courses will be offered:

**103. Clinical Lectures.**

Dr. LENNON.

First semester, twice a week. 32 hours.

**104. Section Work.**

Dr. LENNON.

The class will be divided into sections for demonstration of neurological cases at the Out-Patient Department and in the wards of the University of California Hospital.

First semester, each student. 32 hours.

For electives in this department, see pp. 58-59.

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**DERMATOLOGY**

HOWARD MORROW, M.D., Clinical Professor of Dermatology.

L. S. SCHMITT, B.S., M.D., Instructor in Dermatology.

A. W. LEE, M.D., Assistant in Dermatology.

F. S. ZUMWALT, M.D., Assistant in Dermatology.

Instruction in this department is carried on during the last semester of the third year and the first semester of the fourth year (during the year 1913-14 instruction will be given to the fourth year class during the first semester only), and consists of clinical lectures, demonstrations and quizzes. Students also visit the San Francisco Isolation Hospital, where leprosy, variola and varicella are demonstrated. Instruction is also given in the various laboratory procedures used in the diagnosis of syphilis.

## THIRD YEAR

101. Clinical Demonstrations, Anatomy and Therapeutics of the Skin.  
Professor MORROW.  
Once a week, second semester. 16 hours.
102. Syphilis. Laboratory Diagnosis. Dr. SCHMITT.  
Once a week, second semester. 16 hours.

## FOURTH YEAR

During 1913-14 the following courses will be given the fourth-year class:

103. Clinical Demonstrations, Anatomy and Therapeutics of the Skin.  
Professor MORROW.  
Once a week for first half first semester and twice a week for second half first semester. 24 hours.
104. Syphilis. Laboratory Diagnosis. Dr. SCHMITT.  
Once a week for one half first semester. 8 hours.
105. Section Work.  
Professor MORROW and Drs. SCHMITT, LEE, and ZUMWALT.  
Each student. 16 hours.  
For electives in this department, see p. 59.

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HYGIENE AND PREVENTIVE MEDICINE

## THIRD YEAR

The course in Hygiene, Public Health, and Preventive Medicine is designed to meet the need of those who are to become medical practitioners. While fairly comprehensive in scope, it is not offered as a substitute for the especial training necessary to equip for positions as medical health officers. It does aim to emphasize the exact relations of the private practitioner to the public health. The scope of the course will include the following topics: The legal mechanism for the control of disease, vital statistics, transmissible diseases and their epidemiology, occupational diseases, milk supply in relation to public health, water supply and sewage disposal, food supply, meat inspection, disinfection, economic cost of diseases, saving through conservation, etc.

Experts representing different branches of public health work will cooperate so that each lecture will be given by some one particularly trained in the field covered.

## 101. Lectures.

First and second semesters, once a week. 32 hours.

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**MATERIA MEDICA AND PHARMACY****THIRD YEAR**

H. M. SIMMONS, Ph.G., M.D., Instructor in Materia Medica.

This course is purely practical, embraces the manufactures of preparations of the U. S. Pharmacopeia and National Formulary: the art of prescribing and combining medicines, writing and dispensing prescriptions, considering the construction from the standpoint of solubility, active principles, physiological action, incompatibility, and vehicles.

This course will be given in the Pharmaceutical Laboratory of the Pharmacy College.

Laws governing the prescribing, dispensing and sale of narcotic and habit forming drugs, pure food and drug and poison laws will be considered.

The courses in Materia Medica, Toxicology, and Therapeutics includes a brief history of the use of remedial agents, the chemical, botanical and biological sources of the substances used in the treatment of disease, their active principles, chief medicinal action, indication, contraindication, preparations and doses.

Toxicology is taken from the physician's point of view, the absorption and elimination of poisons, the physical signs and symptoms, effects, antidotes and treatments, the toxic and lethal doses.

101. Practical Pharmacy.

Dr. SIMMONS.

First and second semester, once a week. 64 hours.

102. Materia Medica, Toxicology, and Therapeutics.

Dr. SIMMONS.

First and second semester, once a week. 32 hours.

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**DEPARTMENT OF SURGERY**

The Department of Surgery includes Orthopedic Surgery, Urology, Laryngology, Rhinology and Otology, Ophthalmology and Roentgenology.

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**GENERAL SURGERY**

WALLACE I. TERRY, B.S., M.D., Professor of Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

SAXTON T. POPE, M.D., Instructor in Surgery.

DUDLEY TAIT, B.S., M.D., Assistant in Experimental Surgery.

MARY E. BOTSFORD, M.D., Assistant in Surgery.

LOUIS P. HOWE, M.D., Assistant in Surgery.

ANNA K. DAVENPORT, M.D., Assistant in Surgery.

STERLING BUNNELL, B.S., M.D., Assistant in Surgery.

HOWARD C. NAFFZIGER, M.S., M.D., Assistant in Surgery.

In accordance with the new plan of instruction, the student will finish all his required work except medicine and surgery at the end of the first semester of the fourth year, and during the second semester of that year he will be allowed to take any of the elective courses offered.

Instruction in surgery will begin in the second semester of the second year and continue through the third and fourth years.

The following courses will be given during the year 1913-1914:

## SECOND YEAR

### 101. Elementary Surgery.

Professor TERRY.

A course of lectures, recitations and demonstrations covering the principles of surgery. Asepsis, antisepsis, the process of repair, surgical infections, thrombosis and embolism, wounds and tumors will be among the subjects discussed. These subjects will be illustrated when possible by clinical cases.

One hour a week, second semester. 16 hours.

At University of California Hospital.

### 102. Section Work.

Drs. POPE and BUNNELL.

This course will be given in the Out-Patient Department and in the wards of the hospital and will include practical instruction in the diagnosis of minor surgical conditions, history taking, bandaging, the dressing of wounds and the technic of minor operations.

Three hours a week for six weeks, second semester. 18 hours.

At University of California Hospital.

## THIRD YEAR

### 103. Surgical Lectures, Recitations and Demonstrations.

Professor TERRY.

A systematic course covering general, special, regional and operative surgery. Clinical material will be utilized as much as possible to illustrate the lectures.

Two hours a week, first and second semesters. 64 hours.

At University of California Hospital.

### 104. Clinical Demonstrations.

Dr. BRUNN.

A conference course in which selected cases will be brought before the class and the etiology, diagnosis, prognosis, pathology and treatment discussed. These cases will be presented by students who have previously studied them.

One hour a week, first and second semesters. 32 hours.

At San Francisco Hospital.

### 105. Surgical Out-Patient Clinics.

Drs. POPE and BUNNELL.

The students will take histories and act as clerks and dressers. The class will be divided into sections.

Section work, each student. 39 hours.

At University of California Hospital.

106. Surgical Section Work. Drs. BRUNN, HOWE and NAFFZIGER.  
Part of the work in this course will be in the wards where cases will be assigned for study and conference discussion. If the cases be operative the students will assist at the operations and follow the after-treatment. Part of the time will be devoted to typical operations on the cadaver.  
Section work, each student. 39 hours.  
At San Francisco Hospital.
107. Surgical Physiology and Pathology. Dr. POPE.  
Laboratory exercises and demonstrations including the physiology of respiration and circulation as related to surgery, the study of shock, cerebral anemia and compression, the effect of anesthetics, transfusion of blood and the transplantation of tissues. The repair of various tissues will be shown by experimental methods. The class will be divided into sections.  
Four hours a week for about thirteen weeks, first and second semesters. 50 hours.  
At University of California Hospital.
108. Surgical Technic. Dr. BUNNELL.  
Laboratory exercises and demonstrations of the methods of disinfection and sterilization of hands, instruments and materials used in operations. The administration of anesthetics and the use of instruments and the various surgical appliances will be taught by means of practical exercises, controlling the work by bacteriological studies. The class will be divided into sections.  
Four hours a week for about six weeks, first semester. 25 hours.  
At University of California Hospital.
109. Neurological Surgery. Dr. NAFFZIGER.  
A lecture and demonstration course having special reference to the physiology and the surgical diagnosis of diseases of the nervous system. The surgical treatment will be briefly considered.  
One hour a week, first semester. 16 hours.  
At University of California Hospital.

## FOURTH YEAR

110. Surgical Lectures, Recitations and Demonstrations. Professor TERRY.  
A continuation of course 103.  
Two hours a week, first and second semester. 64 hours.  
At University of California Hospital.
111. Surgical Wards. Professor TERRY and Assistants.  
Cases will be assigned to students, who will write histories, make physical examinations and do the necessary laboratory work. The students will assist in operations which may be performed on these patients and will follow the after-treatment. The administration of anesthetics will also be permitted under supervision. In other words, the students will act as surgical externes.

Two hours a week, first semester. 32 hours.  
Eight hours a week, second semester. 128 hours.  
At University of California Hospital.

112. Roentgenology.

Dr. DAVENPORT.

This course covers a general outline of radiology and radiotherapy and will be made as practical as possible.

One hour a week, second semester. 16 hours.  
At University of California Hospital.

For electives in this department, see p. 59.

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**ORTHOPEDIC SURGERY**

SAMUEL J. HUNKIN, M.D., Clinical Professor of Orthopedic Surgery.  
CARL C. CRANE, M.D., Assistant in Orthopedic Surgery.  
WALTER I. BALDWIN, B.S., M.D., Assistant in Orthopedic Surgery.

Eight hours are given in the first semester of the fourth year to didactic work. This course is planned to cover generally the subject of the commoner joint, nerve and congenital conditions with the deformities which are consequent on them and the laws which govern their development. At this time is also considered the mechanical problems involved in the prevention and cure of the deformities so that the student may be ready to "think straight" about the cases which are later presented to him.

Eight hours are given in the first semester of the fourth year to demonstration of groups of cases in which the various stages of the disease under consideration, the character of the deformities offered, with the mechanical plans for their correction, will be demonstrated and discussed together.

Section work, with not over five in each section, every day in the Out-Patient Department and in the wards of the University of California Hospital. Available material is very abundant. The diagnosis of tuberculosis and syphilis of bones and joints, and their treatment, is daily demonstrated. Chronic joint diseases and their deformities, congenital deformities and those dependent upon brain, cord and nerve lesions are taken up, discussed, and the treatment planned and put into operation. Patients are assigned to every student, who is responsible for the record, and who is taken into consultation regarding the mechanical appliances needed. The student follows the splint making, and before leaving is himself required to manufacture competent splints for his patients. When operation is necessary, the student follows the patient into the

operating room, and whenever possible assists in the procedure. In this manner, the student is brought into close contact with his patient and is taught the reason for each and every step in the treatment.

#### FOURTH YEAR

101. Lectures. Professor HUNKIN.  
Once a week, first half, first semester. 8 hours.
102. Clinical Demonstrations. Professor HUNKIN.  
Once a week, second half first semester. 8 hours.
103. Section Work.  
Professor HUNKIN, Drs. CRANE and BALDWIN and Assistants.  
Each student, first semester. 30 hours.  
For electives in this department, see p. 60.
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#### LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY

ALBERT J. HOUSTON, B.L., M.D., Instructor in Laryngology, Otology and Rhinology.  
FREDERICK C. LEWITT, B.S., M.D., Assistant in Laryngology, Otology and Rhinology.  
ABEL W. JOHNSON, A.M., M.D., Assistant in Laryngology, Otology and Rhinology.

101. Clinical Lectures. Dr. HOUSTON.  
Third year, second semester. 24 hours.  
At University of California Hospital.
102. Section Work. Drs. HOUSTON, LEWITT, and JOHNSON.  
Third year, second semester. 38 hours.  
Fourth year, second semester. 30 hours.  
At University of California Hospital.  
For electives in this department, see p. 60.
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#### OPHTHALMOLOGY

WALTER SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.  
WILLIAM F. BLAKE, A.B., M.D., Instructor in Ophthalmology.  
EDGAR W. ALEXANDER, B.S., M.D., Instructor in Ophthalmology.

101. Clinical Lectures. Drs. FRANKLIN and BLAKE.  
Third year, second semester. 24 hours.  
At University of California Hospital.
102. Section Work. Drs. FRANKLIN, BLAKE, and ALEXANDER.  
Fourth year, first semester. 38 hours.  
At University of California Hospital.  
For electives in this department, see p. 60.
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### UROLOGY

W. P. WILLARD, M.D., Instructor in Urology.  
— — —, Assistant in Urology.

Work in this department will consist of didactic lectures, clinical lectures and the treatment of patients in the Out-Patient Department. Instruction will be given in endoscopy, cystoscopy, and ureteral catheterization, and the application of renal functional tests.

### FOURTH YEAR

101. Didactic Lectures on Genito-urinary Diseases. Dr. WILLARD.  
Once a week for eleven weeks, first semester. 11 hours.
102. Lectures on Surgical Kidney Diseases and Functional Tests. Dr. WILLARD.  
Once a week, first semester. 5 hours.
103. Section Work, in Out-Patient Department. Dr. WILLARD and Assisants.  
Each student, first semester. 30 hours.  
For electives in this department, see p. 60.
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### DEPARTMENT OF GYNECOLOGY AND OBSTETRICS

JOSIAH MORRIS SLEMONS, A.B., M.D., Professor of Gynecology and Obstetrics.  
WILLIAM G. MOORE, M.D., Instructor in Gynecology.  
LOUIS I. BREITSTEIN, B.S., M.D., Instructor in Obstetrics.  
ARTHUR H. MCERSE, A.B., M.D., Instructor in Gynecology and Obstetrics.  
FRANK TOPHAM, M.D., Assistant in Obstetrics.



**GYNECOLOGY****FOURTH YEAR**

Instruction is given by lectures, recitations and clinical teaching. Clinics are held in the wards and Out-Patient Department of the University Hospital.

**101. Lectures and Recitations.**

Professor SLEMONS, Drs. MOORE and MORSE.

First semester, once a week. 16 hours.

**102. Demonstrations in Wards of University of California Hospital.**

Professor SLEMONS, Drs. MOORE and MORSE.

First semester, once a week. 16 hours.

**103. Section Work in Out-Patient Department.**

First semester, each student. 32 hours.

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**OBSTETRICS**

Instruction in Obstetrics is given in the third and fourth years. The work given in the third year is prescribed and must be taken by all students, while that of the fourth year\* is elective.

Recitations and Demonstrations.

This course covers the fundamental principles of Obstetrics and closely follows the text-book. The students are assigned chapters to prepare for recitations. The course is illustrated by models, charts, projectoscope and pathological specimens.

**Practical Instruction covers:**

Instruction in the examination of pregnant women. This includes history taking, abdominal and vaginal examinations and pelvimetry.

Instruction in the conduct of labor. Students witness a limited number of deliveries in the Maternity.

Instruction in studying the conditions of the puerperium and of the newborn.

**Hospital and Outside Service.**

Each student for a period of two weeks during his third year must give his entire time as assistant to the obstetrical interne. During this time in the hospital he makes morning and evening rounds in the wards for mothers and infants, assists the interne at deliveries of ward patients and witnesses operations. In his extramural

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\* Students graduating 1914 will have prescribed work in their fourth year.

service he visits and examines pregnant women at their homes, delivers them personally, makes visits during the puerperium, also completes post-partum examinations at the time of discharge. All this work is done under the supervision of instructors.

### THIRD YEAR

101. Recitations and Demonstrations.

Professor SLEMONS, Drs. BREITSTEIN and MORSE.

First and second semesters, three times a week. 96 hours.

102. Clinical Work.

Professor SLEMONS, Drs. BREITSTEIN, MORSE, and TOPHAM.

First and second semesters, twice a week. 64 hours.

103. Ward Work.

Professor SLEMONS, Drs. MORSE and BREITSTEIN.

First and second semesters, each student. 32 hours.

104. Conferences.

Professor SLEMONS, Drs. MORSE and BREITSTEIN.

First and second semesters, once a week. 32 hours.

105. Clinical Work.

Professor SLEMONS, Drs. MORSE and TOPHAM.

First and second semesters, each student. 32 hours.

106. Ward Work.

Professor SLEMONS, Drs. MORSE and BREITSTEIN.

Second semester, once a week. 16 hours.

For electives in this department, see p. 60.

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### FOURTH-YEAR ELECTIVES

For the year 1913-14 part of the last semester of the fourth year has been set aside for electives. A minimum of 256 hours is demanded. Electives are arranged as double-courses, single-courses, half-courses, and quarter-courses. A *double-course* occupies three hours per day for two months and has a value of 128 hours. A *single-course* occupies three hours per day for one month and has a value of 64 hours. A *half-course* occupies two hours per week and has a value of 32 hours, and a *quarter-course* occupies one hour per week and has a value of 16 hours per semester.

Students wishing to specialize in any major branch of medical study may elect more than one of the courses offered in a given subject, but no student will be allowed to devote his whole elective period to one subject without special permission of the Executive Committee of the Faculty and the consent of the head of the department concerned.

Students electing research work which necessarily is prolonged beyond the time designated for that subject, will be permitted to finish it provided the time required does not extend beyond the semester. The permission of the Executive Committee of the Faculty will be necessary to carry out this arrangement.

The final choice of electives must be left at the secretary's office on or before December 1, 1913. No changes will be allowed after the final arrangement is made. The time allotted for the students' electives, together with the schedule thereof, must be determined by the Secretary of the Faculty, and the Faculty reserves the right to make any changes deemed necessary in the selection and arrangement of the courses chosen by the student.

Examinations will be held at the end of each course, for the most part practical, and the grade assigned to each student will be sent to the secretary's office as soon as the course has terminated.

The value of the courses, as stated above, when elected in anatomy physiology, and pathology and bacteriology, must depend on arrangement with the heads of the departments concerned.

### ANATOMY

#### 2. Histological Technique.

Mr. MILLER.

Designed for those wishing to further familiarize themselves with the general and special methods of obtaining, fixing, embedding, sectioning, staining, and mounting material for microscopical examination. Hours to be arranged.

#### 109. Special Anatomy for Physicians and Advanced Students.

Assistant Professors MOODY and HARVEY.

Hours to be arranged.

#### 210. Research. Assistant Professors MOODY and HARVEY and Dr. SMITH.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of members of the staff. The course also gives opportunity for those wishing to gain experience in special histological technique and in the construction of papers for publication. If the results obtained merit it, they will be published. Hours optional.

#### 211. Journal Club.

Assistant Professor MOODY.

Reviews of current anatomical literature will be presented by the students and discussed informally.

### PHYSIOLOGY

#### 110. Experimental Biology.

Assistant Professor MOORE.

Special problems in regeneration and the tropisms. Hours to be arranged.

#### 111A. Advanced Physiology.

Assistant Professor MAXWELL.

Some simple piece of research is repeated and extended in connection with a study of the original literature on the subject.

#### 111B. Advanced Chemical Biology.

Associate Professor ROBERTSON.

Special topics may be selected by the student in conference with the professor as subjects of advanced and intensive study.

212. Research in Physiology.  
Hours to be arranged.

Associate Professor MAXWELL.

213. Research work in Physiological Chemistry.

Associate Professor ROBERTSON.

Open to students who have the necessary time at their disposal and who have the necessary training. The subject of the research and the time to be devoted to it to be arranged in conference with Professor Robertson.

### PATHOLOGY AND BACTERIOLOGY

104. Experimental Pathology.

Assistant Professor RUSK and Dr. CHRISTIANSEN.

An elective course to which a limited number (not over six) especially qualified students will be admitted. Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alterations will be undertaken and the results demonstrated to those in Pathology 103, which latter course it is intended to supplement. Special problems may also be undertaken.

201. Research. Problems of Infection and Immunity. Professor GAY.  
Either half-year. Hours and units to be arranged.

202. Research. Neuropathology. Assistant Professor RUSK.  
Either half-year. Hours and units to be arranged.

203. Research. Bacteriology and Protozoology. Associate Professor MEYER.

The investigation of concrete problems suggested by the work in medical bacteriology. Either half-year. Hours and units to be arranged.

204. Advanced Morbid Anatomy and Histopathology.

Assistant Professor COOKE.

An elective course for fourth year and graduate students in medicine, comprising autopsy technic and the working up of tissues and cultures resulting from post mortem examinations. University of California Hospital. Hours and units to be arranged.

### MEDICINE

201. Tropical Medicine. Under the supervision of Professor MOFFITT.

A few of the main subjects in tropical medicine and sanitation will be considered. The cooperation of the Medical Department of the U. S. Army and Public Health Service is promised and considerable material is available in the hospital wards and Out-Patient Department. At the University of California Hospital and such other places as material becomes available.

Quarter course. Time to be arranged.

## 202. Studies in Cardiac Pathology.

Dr. ALLEN.

This course will take up the study of the heart by means of the newer graphic methods. Opportunity will be afforded the student to study the use of the polygraph and the electro-cardiograph. Particular stress will be laid upon the interpretation of records from these instruments.

Half course. Time to be arranged.

## 203. Diseases of Metabolism.

Dr. BINE.

During this semester one or more hours a week will be devoted to lectures and work in the physiological chemical laboratory.

Half or quarter course. Time to be arranged.

## 204. Clinical Medicine in the Wards and Out-Patient Department.

Students will act as clinical clerks in the wards and Out-Patient Department. This work will be under the supervision of a member of the department and will include such laboratory studies of the patients as are necessary. Time will also be allotted to visit the Tuberculosis Clinic and Hospital, and also the Isolation Hospital.

Single course or double course. Forenoons.

## PEDIATRICS

## 201. Pediatrics.

An elective course in pediatrics will be open to fourth-year men in the wards of the University Hospital, the San Francisco Hospital and the Isolation Hospital (by courtesy of the San Francisco Board of Health and Dr. A. A. O'Neill). This course will be a practical bedside course, in which students will be expected to do all the work in connection with the cases assigned them. This will include following the case daily, doing all the laboratory work necessary in the case, and looking up literature on the case as far as available. There will be ward talks and demonstrations in the laboratory. Case histories will be taken up to cover conditions which are considered important and which are not found in the wards during the time the course is in progress.

Single course or double course. Forenoons.

## NEUROLOGY

## 201. Neurology.

Dr. LENNON offers a course in which the newer problems of neurology will be reviewed.

Quarter course. Time to be arranged.

## 202. Neurology.

This course consists of advanced work in the Out-Patient Department, the students acting as clinical clerks and assistants.

Single course or double course. Forenoons.

## 203. Psychiatry.

A series of sixteen lectures and demonstrations will be given by different men whose names will be announced later.

Quarter course. Time to be arranged.

## DERMATOLOGY

## 201. Dermatology.

This course consists of advanced work in the Out-Patient Department, the students acting as clinical clerks and assistants.

Single course or double course. Forenoons.

## 202. Dermatology.

Professor MORROW.

This course consists of preparation and examination of biopsies and bacteriology of the skin. Opportunity is also given for research.

Half course. Time to be arranged.

## SURGERY

## 201. Surgery.

The students will act as clinical clerks in the wards of the University of California Hospital and the San Francisco Hospital and in the Out-Patient Department of the former. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited.

Single course or double course. Forenoons.

## 202. Surgical Physiology and Pathology. Under the direction of Dr. POPE.

Half course. Time to be arranged.

A research course in thoracic, vascular and abdominal surgery will be offered. The transplantation of tissues and organs, and the surgery of the ductless glands will also form a part of this work. The number of students will be limited.

## 203. Operative Technic.

Dr. BUNNELL.

A course in operative surgery, including the technic of various surgical operations which will be taught on the cadaver in the research laboratory. Special attention is paid to those operations not included in other courses offered at the University of California Hospital.

Half course. Time to be arranged.

## 204. Surgery of the Peripheral and Central Nervous System.

Dr. NAFFZIGER.

Lectures, demonstrations and operations. This course will supplement course 109. Opportunity will be afforded for research work in problems of this branch of surgery. The work will be carried on at the University of California Hospital and the San Francisco Hospital.

Half course. Time to be arranged.

## ORTHOPEDIC SURGERY

## 201. Orthopedic Surgery.

This course consists of advanced work in the Out-Patient Department, the students acting as clinical clerks and assistants.

Single course or double course. Forenoons.

## UROLOGY

## 201. Urology.

This course consists of advanced work in the Out-Patient Department, the students acting as clinical clerks and assistants.

Single course or double course. Forenoons.

## OPHTHALMOLOGY

## 201. Ophthalmology.

This course consists of advanced work in the Out-Patient Department, the students acting as clinical clerks and assistants.

Single course or double course. Forenoons.

## LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY

## 201. Laryngology, Otology and Rhinology.

This course consists of advanced work in the Out-Patient Department, the students acting as clinical clerks and assistants.

Single course or double course. Forenoons.

## ROENTGENOLOGY

## 201. Roentgenology.

Dr. DAVENPORT.

Students can arrange for time in which they may act as assistants in the Department of Roentgenology, where they will be assigned to assist in such technical work as may be deemed necessary.

Single course or double course. Time to be arranged.

## OBSTETRICS AND GYNECOLOGY

## OBSTETRICS

201. Touch course on antepartum, intrapartum and postpartum cases.

202. Ward and nursery rounds.

203. Delivery of patients in Maternity and Out-Patient Service.

Opportunity to witness all operations.

204. Laboratory.

A practical and laboratory course on diseases and feeding of the newborn. This includes examination of mothers' milk, cows' milk, preparation of modified milk and the calculation of food formulae and caloric values.

## GYNECOLOGY

201. Gynecology.

This course will be given in the wards and Out-Patient Department of the gynecology service of the University of California Hospital, and the San Francisco Hospital. Students will be given an opportunity to follow closely ward cases, various operations and post operative treatment. Will also be required to study and report on pathological specimens removed by operation.

Single course or double course. Forenoons.

**GRADUATES 1913**

Warren Barrett Allen	Berkeley	Richard Warren Harvey, B.S., M.S.	Berkeley
Daniel Irwin Aller, A.B.	Sanger		
Joseph Henry Catton, B.S.	Berkeley	Selby Harold Marks, B.S.	Ukiah
Earl Hamilton Cornell, B.S.	Oakland	Ruth Charlotte Risdon, B.S.	Berkeley
		Charles Lee Tranter, B.S.	San Francisco

**MATRICULATES 1912-13****FOURTH-YEAR CLASS**

Warren Barrett Allen	Berkeley	Richard Warren Harvey, B.S., M.S.	
Daniel Irwin Aller, A.B.	Sanger		Berkeley
Joseph Henry Catton, B.S.	Berkeley	Selby Harold Marks, B.S.	Ukiah
Earl Hamilton Cornell, B.S.	Oakland	Ruth Charlotte Risdon, B.S.	Berkeley
		Charles Lee Tranter, B.S.	San Francisco

**THIRD-YEAR CLASS**

Roy Charles Abbott	Ontario	Henry Ehlers, B.S.	San Francisco
Frank Stanley Baxter, B.S.	Oakland	Bess Lewis, B.S.	Los Gatos
Hugh Kling Berkley	Santa Monica	Edna Locke, B.S., M.S.	Eureka
Edward Cline Bull, B.S.	Marysville	George Warren Pierce	Pomona
Esther Clarice Cumberland, B.S.		Albert Holmes Rowe, B.S., M.S.	Oakland
	Los Angeles	Fred Nicholas Scatena, B.S.	San Francisco
Ruby Lacy Cunningham, B.S., M.S.			
	San Bernardino		

**SECOND-YEAR CLASS**

Irvin H. Betts	Salinas	George Arneke Kretsinger	Hayward
John Talmadge Boyer	San Francisco	Fred Herman Kruse	Tulare
Elton Ralph Charvos	Santa Monica	Alice Freeland Maxwell	San Francisco
Paul William Christman	Pasadena	Leon Walter Miner	Minneapolis, Minn.
Abelson Epsteen	San Francisco	Irene Amy Patchett, B.S.	Annapolis
Aaron Friedman	San Francisco	Jay Marion Read, B.S.	San Francisco
Justin Keyser Fuller	San Francisco	John Morse Rehfsch	San Francisco
Clain Fanning Gelston	Hamilton	Agnes Julia Scholl, A.B.	Los Angeles
Ramon Augustus Gilbert	San Francisco	Homer Carlton Seaver, A.B.	Pomona
Lynn Newton Hart	Santa Rosa	Robert Stanton Sherman, B.S.	Berkeley
Henry Leopold Holzberg	San Francisco	Emily Victoria Truman, Ph.B.	Berkeley
William Robert Hume	Oakland	Clarence Edgar Wells, B.S.	Visalia
Harold Lund Jensen	Santa Cruz	John Homer Woolsey, B.S.	Oakland

<sup>1</sup>, in residence first half-year only, 1912-13; <sup>2</sup>, second half-year only.



## FIRST-YEAR CLASS

Charles Albert Ainslee	Oxnard	Frederick George Linde	Auburn
Mabel Florence Arrington		Charlotte Smith Linden	San Francisco
	E. Northfield, Mass.	Charles Pierre Louis Mathé	San Francisco
Elizabeth Worley Bailie	Berkeley	Laird Monterey Morris	Berkeley
Eugene Howard Barbera	Oakland	Myrl Morris	Berkeley
Charles Barrows Bennett, Ph.D.	Berkeley	Edward Francis Mullaly	Vallejo
William Archdall Boyle	San Rafael	Robert Reid Newell	Stockton
Rowland Sill Briggs	Sacramento	Joseph Allen Owen	Red Bluff
Leonard William Buck	Vacaville	Frank William Pinger	Berkeley
Eben James Carey	Los Angeles	'Cyril Quill	San Francisco
William Edward Chamberlain	Oakland	Paul B. Roen, A.B.	Los Angeles
Georgine Elizabeth Bohn Christiansen		Rose Marguerite Rosenthal	Berkeley
	Copenhagen, Denmark	John Carroll Ruddock, Jr.	Ukiah
Enos Paul Cook	Oakland	Edward Salomon	San Francisco
Mary Craig	Upland	Margaret Schulze	Berkeley
Brython Parry Davis	Weaverville	Henry Hunt Searles	Nevada City
'Rudolph Ludwig Dresel	San Francisco	Robert G. Sharp	Otay
'William Tilden Duncan	San Francisco	Julius Sherman	San Francisco
Thomas Balfour Mackie Dunn	Santa Cruz	'Elizabeth McNutt Simpson	Sebastopol
Leon Ehrenfeld	Pasadena	Walter Charles Smallwood	Richmond
Louise Relief Everett	San Francisco	Caroline Hallowell Smedley, A.B.	Hollywood
Harold Augustus Fletcher, B.S.	Reno, Nev.		
Kendal Phelps Frost	Los Angeles	'Philip Edward Smith, Ph.D.	Ithaca, N. Y.
Orville Roscoe Goss	Berkeley	Daniel Warren Sooy	North San Juan
Herold Pittman Hare	Fresno	William Ben Thompson, A.B.	
George Hashiba	San Francisco		South Pasadena
'Robert Harold Heaney	San Francisco	Benjamin Harrison Viau, B.S.	Sanger
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'Warren Douglas Horner	Chico	Albert Fabian Welin	Chicago, Ill.
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Maurice Jones	Ione		
'Ushio Keijie	Tokyo, Japan		

<sup>1</sup>, in residence first half-year only, 1912-13; <sup>2</sup>, second half-year only.

**UNIVERSITY OF CALIFORNIA**

**MEDICAL SCHOOL**

**ANNOUNCEMENT FOR 1914-15**

**UNIVERSITY OF CALIFORNIA PRESS**

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**1914**



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## CALENDAR

1914

August 3.—Undergraduate applications for admission to the Academic Departments and Medical School, with credentials, should be filed with the Recorder of the Faculties at Berkeley. This may be done by mail.

August 6-11.—Entrance examinations at Berkeley for freshman standing (pre-medical) in the Academic Colleges. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before August 5. But applications for permits to be sent by mail should be made as far in advance of August 5 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall.

August 10.—Academic year begins.

August 10.—Examinations begin for applicants for advanced standing and for students previously conditioned.

August 13, 14, 15, 9A.M. to 12M.—Office hours of the Dean of the Medical School at California Hall, Berkeley. Registration of first-year and second-year students in the Dean's office, California Hall.

August 13, 14, 15, 10-12 A.M.—Registration of students of the third-year and fourth-year classes in the Secretary's office in the main building of the Medical School in San Francisco.

August 17.—Class work begins. Payment of the first installment of the tuition fee is required on or before this date.

November 26-28.—Thanksgiving Recess.

December 7.—Examinations begin.

December 14.—Christmas vacation begins.

1915

January 4.—Second half-year begins. Payment of the second installment of the tuition fee is required on or before this date.

March 23.—Charter Day: a holiday.

April 26.—Examinations begin.

May 12.—Commencement Day.



## **ORGANIZATION**





# REGENTS OF THE UNIVERSITY

NOTE.—The regular meetings of the Regents are held at 2 P.M. on the second Tuesday of each month, except July, and on the day before commencement, at such places as may from time to time be determined, ordinarily at the San Francisco Institute of Art, California and Mason streets, San Francisco.

## REGENTS EX OFFICIO

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621 Union Oil bldg, Los Angeles

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Speaker of the Assembly  
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State Superintendent of Public Instruction  
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Seventh and Townsend sts, San Francisco

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President of the Mechanics' Institute  
Mills bldg, San Francisco

BENJ. IDE WHEELER, Ph.D., LL.D.,  
Litt.D.  
President of the University  
California Hall, Berkeley

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The term of the appointed Regents is sixteen years, and terms expire March 1. of the year indicated in parentheses. The names are arranged in the order of original accession to the board.

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Wells, Fargo-Nevada National Bank,  
San Francisco

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Pleasanton  
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ARTHUR WILLIAM FOSTER, Esq. (1916)  
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(1920)  
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Treasurer  
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1107 Merchants' Exchange bldg. San  
Francisco

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220 California Hall, Berkeley

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*San Diego Marine Biological Laboratory:*  
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2669 California Street, San Francisco.

THOMAS W. HUNTINGTON, A.B., M.D., *Emeritus Professor of Clinical Surgery*,  
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WILLIAM B. LEWITT, M.D., *Emeritus Professor of Pediatrics*,  
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240 Stockton Street, San Francisco.

†FREDERICK P. GAY, A.B., M.D., *Professor of Pathology*,  
Department of Pathology, University of California, Berkeley.

WALLACE I. TERRY, B.S., M.D., *Professor of Surgery*,  
240 Stockton Street, San Francisco.

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University Hospital, San Francisco.

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University Hospital, San Francisco.

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Department of Pathology, University of California, Berkeley.

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University Hospital, San Francisco.

\* Voting members are those above the rank of instructor.

† On leave of absence.

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Department of Physiology, University of California, Berkeley.

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#### VOLUNTARY ASSISTANTS

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240 Stockton Street, San Francisco.
- JOSEPH HENRY CATTON, M.D., *Voluntary Assistant in Medicine*,  
209 Post Street, San Francisco.



**ADMINISTRATIVE OFFICERS**

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California Hall, Berkeley.

HERBERT C. MOFFITT, B.S., M.D., *Dean,*

University Hospital, San Francisco.

J. C. ROWELL, A.B., M.A., *Librarian,*

Doe Library Building, Berkeley.

H. L. LEUPP, A.B., *Associate Librarian,*

Doe Library, Berkeley.

JAMES SUTTON, Ph.B., *Registrar,*

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L. S. SCHMITT, B.S., M.D., *Secretary,*

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H. T. SUMMERSGILL, Superintendent	J. M. SLEMONS
W. P. LUCAS	L. S. SCHMITT
G. H. WHIPPLE	

COMMITTEE ON HOSPITAL AFFAIRS (S. F. HOSPITAL)

H. BRUNN	W. W. KERR
W. G. MOORE	

The Dean and Secretary are ex-officio members of all standing committees.

UNIVERSITY HOSPITAL MEDICAL STAFF

H. T. SUMMERSGILL, M.D.	Superintendent
H. C. MOFFITT, M.D.	Physician-in-Chief
W. I. TERRY, M.D.	Surgeon-in-Chief
J. M. SLEMONS, M.D.	Gynecologist-in-Chief
W. P. LUCAS, M.D.	Pediatrician-in-Chief
F. P. GAY, M.D.	Pathologist
HOWARD MORROW, M.D.	Dermatologist
W. S. FRANKLIN, M.D.	Ophthalmologist
A. J. HOUSTON, M.D.	Laryngologist
L. S. SCHMITT, M.D.	Serologist
M. B. LENNON, M.D.	Neurologist
W. P. WILLARD, M.D.	Urologist
H. W. ALLEN, M.D.	Assistant Physician
E. S. KILGORE, M.D.	Assistant Physician
J. L. WHITNEY, M.D.	Assistant Physician
S. T. POPE, M.D.	Assistant Surgeon
H. C. NAFFZIGER, M.D.	Assistant Surgeon
W. I. BALDWIN, M.D.	Assistant in Orthopedic Surgery
A. K. DAVENPORT, M.D.	Assistant in Radiography
M. E. BOTSFORD, M.D.	Anesthetist
M. KAVANAUGH, M.D.	Anesthetist
W. G. MOORE, M.D.	Assistant Gynecologist
A. H. MORSE, M.D.	Assistant Gynecologist
L. I. BREITSTEIN, M.D.	Assistant Obstetrician
R. L. ASH, M.D.	Assistant Pediatrician
J. V. COOKE, M.D.	Assistant Pathologist

A. W. LEE, M.D.	Assistant Dermatologist, in charge of Medical Art
— — — — —	Resident Physician
— — — — —	Resident Surgeon
W. E. LIBBY, M.D.	Resident Gynecologist
A. E. MEYERS, M.D.	Resident Pediatrician
E. M. WATERS, M.D.	Assistant Resident Pediatrician
R. C. ABBOTT, M.D.	Interne
F. S. BAXTER, M.D.	Interne
H. K. BERKLEY, M.D.	Interne
E. C. BULL, M.D.	Interne
EDNA LOCKE, M.D.	Interne
A. H. ROWE, M.D.	Interne

#### OUT-PATIENT DEPARTMENT

H. C. MOFFITT, M.D., Physician-in-Chief.  
W. I. TERRY, M.D., Surgeon-in-Chief.  
J. MORRIS SLEMONS, M.D., Obstetrician and Gynecologist-in-Chief.  
WILLIAM PALMER LUCAS, M.D., Pediatrician-in-Chief and Director of the  
Out-Patient Department.

#### GENERAL MEDICINE

L. H. BRIGGS, M.D. Chief of Clinic.  
ELDRIDGE J. BEST, M.D.  
LOVELL LANGSTROTH, M.D.  
MILTON ABRAHAMSON, M.D.  
HANS LISSER, M.D.

#### NEUROLOGY

M. B. LENNON, M.D., Chief of Clinic.  
C. L. TRANTER, M.D.

#### PSYCHIATRY

EVA C. REID, M.D., Chief of Clinic.

#### DERMATOLOGY

H. MORROW, M.D., Chief of Clinic.  
L. S. SCHMITT, M.D.  
A. W. LEE, M.D.  
F. S. ZUMWALT, M.D.

PEDIATRICS

ALFRED E. MEYERS, M.D., Resident Physician.  
R. L. ASH, M.D.  
ELLEN S. STADTMULLER, M.D.  
OLGA BRIDGMAN, M.D., Psychologist.  
LOUISE MORROW, M.D., Social Service Worker.

GENERAL SURGERY

S. T. POPE, M.D., Chief of Clinic.  
H. C. NAFFZIGER, M.D.  
HERBERT S. THOMSON, M.D.  
J. P. PRATT, M.D.

OPHTHALMOLOGY

W. S. FRANKLIN, M.D., Chief of Clinic.  
W. F. BLAKE, M.D.  
E. W. ALEXANDER, M.D.  
EDWARD A. GLASER, M.D.

OTOLOGY, LARYNGOLOGY AND RHINOLOGY

A. J. HOUSTON, M.D., Chief of Clinic.  
F. C. LEWITT, M.D.  
A. B. JOHNSON, M.D.  
ALLEN E. PECK, M.D.

UROLOGY

W. P. WILLARD, M.D., Chief of Clinic.  
J. B. LEONARD, M.D.

ORTHOPEDIC SURGERY

WALTER I. BALDWIN, M.D., Chief of Clinic.  
C. C. CRANE, M.D.  
HOWARD MARKEL, M.D.  
Miss M. L. MEL, B.L., Social Service Worker.

WOMAN'S CLINIC

W. G. MOORE, M.D. }  
A. H. MORSE, M.D. } Chiefs of Clinic.  
W. E. LIBBY, M.D.  
R. C. ABBOTT, M.D.  
MAUD E. MORRISON, R.N., Social Service Worker.

EDWARD TAUSSIG, M.D., Physician in charge of Tuberculosis Clinic.  
 L. S. SCHMITT, M.D., Serologist.  
 A. K. DAVENPORT, M.D., Radiographer.  
 Miss HELEN BRUCKMAN, Technician.  
 Miss ELOISE NORWOOD SCOVILLE, R.N., Head Nurse in charge of Patient Department.  
 Mrs. EMILY REED, in charge of Records.  
 Miss HAZEL WILLIAMS, Assistant in charge of Records.

#### SAN FRANCISCO HOSPITAL MEDICAL STAFF

W. W. KERR, M.D. ....	Physician-in-Chief
HAROLD BRUNN, M.D. ....	Surgeon-in-Chief
W. P. LUCAS, M.D. ....	Pediatrician-in-Chief
HOWARD MORROW, M.D. ....	Dermatologist
J. V. COOKE, M.D. ....	Pathologist
W. S. FRANKLIN, M.D. ....	Ophthalmologist
W. G. MOORE, M.D. ....	Gynecologist
M. B. LENNON, M.D. ....	Neurologist
L. S. SCHMITT, M.D. ....	Serologist
L. I. BREITSTEIN, M.D. ....	Obstetrician
J. V. LEONARD, M.D. ....	Urologist
F. C. LEWITT, M.D. ....	Laryngologist
G. E. EBRIGHT, M.D. ....	Assistant Physician
J. B. FRANKENHEIMER, M.D. ....	Assistant Physician
L. P. HOWE, M.D. ....	Assistant Surgeon
H. C. NAFFZIGER, M.D. ....	Assistant Surgeon
FRANK TOPHAM, M.D. ....	Assistant Obstetrician
F. S. ZUMWALT, M.D. ....	Assistant Dermatologist
E. H. CORNELL, M.D. ....	Assistant in charge of Clinical Laboratory
J. H. CATTON, M.D. ....	Voluntary Assistant in Medicine
R. L. CUNNINGHAM, M.D. ....	Interne
G. W. PIERCE, M.D. ....	Interne
HENRY EHLERS, M.D. ....	Interne

## HISTORY AND DEVELOPMENT OF THE SCHOOL

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In 1862, Dr. H. H. Toland erected a building to serve as the nucleus of a medical school. This was subsequently known as Toland Hall and in 1872 was formally transferred to the Regents of the University of California as a department of the University. For many years the affiliation was merely nominal and the medical faculty was in entire control of the policy of the school, the support of the institution being derived from fees of the students.

In 1895, the course of instruction was extended from three to four years. In 1898, the school was moved to its present location on Parnassus Heights, a tract of land of thirteen and one-half acres donated to the University by the late Adolph Sutro. Funds were provided by the Legislature to erect buildings for law, medicine, dentistry and pharmacy, and at a later date the law building was transferred by the Board of Regents to the Medical School.

In 1902, the Board of Regents adopted a resolution of vital importance to the Medical School. Instead of preserving the former loose affiliation it was determined to regard the medical department as an integral part of the University. The properties of the school were transferred to the University, the students' fees were turned into the general University fund and support of the school was assumed by the Regents. The first two years of medicine were at once put upon an academic basis and suitable laboratories equipped.

With the destruction of the Out-Patient Department by the earthquake and fire of 1906, it became necessary to transfer the work of the first two years to Berkeley and to transform the main building of the school into a hospital and out-patient clinic. The separation of the scientific and clinical years proved, as was expected, a serious mistake, and in December, 1911, the Regents of the University announced their intention of bringing together the various departments of the school, of providing a proper modern teaching hospital and of placing the clinical years upon an academic basis. Therefore, on April 9, 1912, it was resolved to consolidate all departments of the school in San Francisco as soon as feasible. A recommendation of the President of the University was adopted which provided a plan of reorganization for the clinical years.

Clinical instruction is now divided into four main departments, Medicine, Surgery, Diseases of Women and Pediatrics. The departments of Obstetrics and Gynecology and Pediatrics are in charge of full time teachers, and as soon as possible the departments of Medicine and Surgery will be placed on the same basis.

#### THE GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH

In memory of her husband, George Williams Hooper, a pioneer citizen of San Francisco, Mrs. Hooper, on Commencement Day, May 14, 1913, transferred to the Regents of the University certain valuable property to serve as a foundation for an institute of medical research. The income at present provided is \$50,000 a year, but at the end of four years \$100,000 per annum will be available.

The formal opening of the Institute was celebrated on March 7, 1914. Addresses were delivered by Dr. Henry S. Pritchett, President of the Carnegie Foundation for the Advancement of Teaching, Dr. Richard M. Pearce, Professor of Research Medicine, University of Pennsylvania, and Honorable Curtis H. Lindley. The policy and work of the Institute is determined by an advisory board of seven members conferring with the Regents of the University.

The building formerly occupied by the Veterinary School has been devoted by the Regents of the University to the work of the Institute. Dr. George H. Whipple, formerly Associate Professor of Pathology in Johns Hopkins University, is Director, and is also Professor of Research Medicine in the Medical School. The work of the Hooper Institute, therefore, will be closely correlated with that of the Medical School. Men at work in research in the Institute will have free access to the University Hospital wards and positions in the Institute will be available for men in the Medical School, who desire to enter a career in Research Medicine. The work of the Hooper Institute in no way interferes with research in each department of the Medical School. As evidence of their realization of the importance of pure research in the Medical School the Regents of the University have this year established a research position in the Department of Pathology.

**REQUIREMENTS FOR ADMISSION  
AND GRADUATION**





## REQUIREMENTS FOR ADMISSION\*

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A preliminary collegiate preparation is required for the course in medicine, and men and women are admitted on the same terms. As candidates for the degree of Doctor of Medicine the School receives the following:

1. Graduates of approved colleges or scientific schools who present evidence of a satisfactory training in Chemistry, Physics and Biology and a reading knowledge of German or French. The courses in chemistry must include Inorganic and Organic Chemistry.

2. Students in the College of Letters, Social Sciences, or Natural Sciences of this University who have received the Junior Certificate and who, in addition to the work of the Junior Certificate, have completed a full year in the Upper Division may, at the beginning of their fourth or senior year in the University, register as students in the Medical School, and upon completion of the first year in the Medical School, may receive the degree of A.B., B.L., or B.S. Students who enter the Medical School in accordance with the foregoing provision will be expected to have completed 94 units of University work in the academic department, including such work in major courses as may be acceptable to the faculty of the college in which the student proposes to take his academic degree. They must also furnish evidence that they have had a satisfactory training in Chemistry, Physics, and Biology and that they possess a reading knowledge of German or French.

3. Students who have satisfactorily completed at least two full years of collegiate work and who have received the Junior Certificate of this University, or its equivalent.

The studies pursued during the two years which lead to the Junior Certificate include English, American History and Civics, Mathematics, Chemistry, Physics, Biology (Zoology), and German or French. Applicants for admission to the Medical School who have pursued their pre-medical studies in some other University must submit credentials from the institution in which they have studied. This statement should include the number of hours devoted to class- and laboratory-work and also the grade received in each subject. For the guidance of those who

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\* All inquiries should be addressed to the Dean of The University of California Medical School.

wish to arrange their preliminary training the courses in Physics, Chemistry, and Zoology given in this University and accepted as the minimum preparation in the sciences named are described below.

## PHYSICS

### 2A-2B, 4A-4B. General Physics.

Professor LEWIS and Associate Professor RAYMOND.

Lectures with experimental illustration, recitations, and problems. Mechanics, properties of matter, heat, sound, light, energy, transformations, electricity, and magnetism.

### 2A-2B. Lectures.

Professor LEWIS.

3 hrs., throughout the year; 2 units each half-year. Tu Th S, 11. The completion of this course admits students of the colleges of Engineering to course 1A; other students either to course 1A or to course 4A. No prerequisite.

### 4A-4B. Recitations and Problems.

Professor LEWIS and Associate Professor RAYMOND.

2 hrs., throughout the year; 2 units each half-year. W F, 9. Prerequisite: matriculation subject 11, or course 2A-2B. Some knowledge of elementary plane geometry is desirable.

### 3A-3B. Physical Measurement.

Assistant Professor MINOR.

Experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. Methods are selected so as to show instructive relations of physical principles, and their adaptation to practical problems. Laboratory exercises twice a week. These courses are usually taken in conjunction with 2A-2B, 4A-4B. Prerequisite: matriculation physics, subject 11.

6 hrs., throughout the year; 2 units each half-year. Tu Th, 1-4.

## CHEMISTRY

### 1A-1B. General Inorganic Chemistry and Qualitative Analysis.

Three hours lectures and quiz, and four hours laboratory work, throughout the year; 5 units each half-year.

Lectures and Quiz.

Assistant Professor HILDEBRAND, Professor LEWIS, Assistant Professors BOOTH, BRAY and TOLMAN, Dr. BURKE, and Mr. ROSENSTEIN.

Two sections: M W F, 9; M W F, 10.

**Laboratory.**

Assistant Professors BOOTH and BRAY, Professor LEWIS,  
Assistant Professor HILDEBRAND, Dr. BUEKE and Mr.  
ROSENSTEIN.

Four sections: I, M F, 1-3; II, Tu Th, 9-11; III, Tu Th, 1-3; IV,  
W, 1-3, S 9-11. Prerequisite: matriculation chemistry sub-  
ject 12b. In special cases students who have credit for matricu-  
lation physics may be allowed to take this course without the  
chemistry prerequisite, but in no case without the written con-  
sent of the instructor.

**8A-8B. Elements of Organic Chemistry.** Assistant Professor BIDDLE.

An introductory study of the compounds of carbon. Recitations and  
lectures with experimental illustrations. Laboratory course 9  
should, if possible, accompany this course.

2 hrs., throughout the year. Lectures, Tu Th, 8.

Fortnightly quiz, hour to be arranged, probably M or Tu, 4.

**9. Elements of Organic Chemistry: Laboratory.**

Assistant Professor BIDDLE.

A comparative experimental study of the physical properties and  
chemical reactions of the more commonly occurring classes of  
organic substances. Supplementary to course 8A-8B and open to  
all students pursuing that course. (Students in the college of  
Chemistry must enroll for three units in this course.)

6 to 9 hrs, either half-year, 2 to 3 units. M W, M F, or M W F, 1-4.

**ZOOLOGY****1A. General Zoology.**

Professor KOFID, Mr. STORER, and Mr. McDONALD.

An introduction to the facts and principles of animal biology, with  
special reference to the evolution of animal life.

Lectures 2 hrs., demonstrations 4 hrs., first half-year; 4 units. Lec-  
tures Tu Th, 10. Demonstrations, four sections: I, M F, 2-4; II,  
Tu Th, 8-10; III, Tu Th, 2-4; IV, W, 2-4, S, 8-10.

Laboratory exercises are essentially illustrative of lectures and are  
based on the examination of living and prepared specimens, supple-  
mented by models and charts.

**5. Elementary Embryology.**

Dr. LONG and Mr. CHANDLER.

8 hrs., second half-year; 4 units. Lecture Tu Th, 8; laboratory Tu Th  
S, 10-12. Prerequisite: course 1A.

In preparation for these studies it may be mentioned that high school physics and chemistry are necessary in order to enroll in the beginning university courses in the same subjects. Whereas these requirements as specified will be accepted for admission in the medical school, it should be pointed out that it is highly desirable that the student should not content himself with the acquisition of a Junior Certificate, but should take at least three years of college work, if possible. By this means, not only is more time offered for work in subjects of general culture outside the scientific requirements, but by a combined seven year course (three years as an undergraduate in the university and four years in the medical school) the two degrees of B.S. and M.D. may be obtained.

Students taking the combined course should elect work of some of the following departments: English, Philosophy, Economics, History, Political Science, Education, and Anthropology.

#### ADMISSION TO ADVANCED STANDING

Applicants for admission to advanced standing may become candidates for the degree of M.D. under the following conditions: (1) They must furnish evidence that they were eligible for admission to the first year class. (2) They must show that courses equivalent in kind and amount to those given in this school in the year or years preceding that to which admission is desired, have been satisfactorily completed. (3) At the discretion of the Executive Committee of the Medical Faculty they must be prepared to pass satisfactory examinations in those subjects for which they ask credit.

#### INSTRUCTION FOR GRADUATES IN MEDICINE

Graduates in medicine may arrange with the heads of the different departments for special work. Graduate students may enter at any time during the year and must register at the Dean's office before beginning work.

Lectures and clinics of interest to practitioners are held on Saturday mornings; for attendance upon these registration is not necessary.

#### CLASS STANDING AND EXAMINATION

For the determination of class standing and for advancement and graduation the results and markings of all studies and examinations conform to the procedures followed in the Academic Department of the University. The numerals 1, 2, 3 indicate that the student has passed in the first, second and third grade; 4 indicates condition; 5 failure.

By the term "Examination" is understood the judgment of the instructor upon the work of a student. This judgment may be reached in three ways: by personal contact with the students and observation of their routine work, by oral examinations, and by written examinations.

\*During or at the close of each academic year the following examinations are held:

*First Year.*—Histology, Systematic Human Anatomy, Physiology and Biochemistry.

*Second Year.*—Morbid Anatomy and Histopathology, Bacteriology, Infection and Immunity, Topographical Anatomy, Pharmacology, Materia Medica, Clinical Pathology, Medical and Surgical Propedeutics.

*Third Year.*—Hygiene, Dietetics, Therapeutics, Medicine, Surgery, Pediatrics, Neurology, Dermatology and Syphilis, Ophthalmology, Obstetrics, Gynecology, Otology, Rhinology, Laryngology, Orthopedic Surgery, Urology, and Roentgenology.

*Fourth Year.*—Electives.

Students who fail to pass the examinations in three or more subjects must repeat the year, the branches in which they were conditioned constituting their curriculum. Those students who fail in two courses must pass one of them before the opening of the academic year following that in which they were incurred, so that not more than one condition can be carried into the second, third, or fourth year; and this must be passed in order to render the student eligible for the examinations held at the end of that session. A condition in any subject completed in a given year must be removed within thirty days following the opening of the succeeding academic session. Under all circumstances prerequisites must be respected. Inasmuch as there will be no opportunity during the clinical years to make up practical courses, no student will be permitted to carry into the third year a condition in a course which includes laboratory work. Fourth-year students who fail in one or two branches may reappear for examination after three months. In the event of their passing the examinations at that time they will be recommended to the Board of Regents for the degree; should they then fail in one branch even, they must repeat their fourth year, the branches in which they were conditioned constituting their curriculum. To the heads of the departments is reserved the right to determine whether a student who has failed in a course shall be entitled to appear for re-examination at the beginning of the next academic year, or be required to repeat the course. The Faculty reserves the right to sever the connection of any student with the Medical School at any time for what it deems either mental or moral unfitness for a career in medicine.

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\* During the Session 1914-15, on account of changes in the curriculum, certain variations from the above arrangement of examinations will be unavoidable.

**REQUIREMENTS FOR GRADUATION**

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years and must be of good moral character. He must have studied Medicine four full years, and must have attended four annual courses as a matriculated student, the last of which has been spent in this School. He must have completed the required work, have fulfilled satisfactorily all special requirements, and have received a satisfactory grade throughout the entire medical course. He must have discharged all indebtedness to the School.

**INTERNE YEAR**

Students entering the School in 1914 and thereafter will be required to supplement the academic course in Medicine with a year as interne in an approved hospital or as a special worker in a department of the Medical School.

## **GENERAL INFORMATION**





## REGISTRATION

Applications for admission and for advanced standing must be addressed to the Dean of the Medical School, San Francisco, or to the Recorder of the Faculties in Berkeley. They must be received at least one month prior to the beginning of the term to allow time for investigation.

Students will not be admitted to Medical Courses until they have registered at the Office of the Recorder (First and Second Years), or at the Office of the Secretary of the Medical School (Third and Fourth Years).

## CHARGES FOR TUITION

The charge for tuition is one hundred and fifty dollars per annum, payable in two installments, August and January. Students will not be admitted to the courses until they have paid their fees for the ensuing semester. A key and breakage deposit of \$25 in the first and second years and of \$10 in the third and fourth years is required for the use of lockers and to cover the cost of material used in laboratories and possible damage to college buildings and equipment. At the close of each session the unexpended balance is returned to the student.

In the first year there is an additional fee of \$15 for dissecting material, \$5 for each part.

## MICROSCOPES AND BLOOD-COUNTING APPARATUS

Students are advised to purchase their own microscopes, but those who do not care to do so may rent one from the School at a cost of five dollars per annum with an additional charge of two dollars if an oil immersion lense is desired. Students using microscopes which belong to the School are liable for damage done the instruments while in their possession.

*The character of the practical work requires that each student own a blood-counting apparatus. This should be purchased at the beginning of the second semester of the second year.*

## MEDICAL SUPERVISION OVER STUDENTS

Each year the Faculty appoints a medical adviser to the students in the Medical School. This officer keeps a definite hour for consultation and when necessary visits students in their homes. Through him the services of specialists are secured when indicated.

Students of the first- and second-year classes are entitled to the advantages offered by the University of California Students' Infirmary in Berkeley. Students resident in Berkeley and requiring hospital care are provided for in the Infirmary without charge, unless special nurses are necessary. Students of the third and fourth classes are similarly provided for in the University Hospital.

Medical students, as well as all other students, in the University of California are required to pass a physical examination by the Medical Examiner before entrance to the University.

### LIBRARIES

Instruction in the medical sciences and the various branches of clinical medicine is incomplete without constant reference to current and authoritative monographic and periodical literature. In research work the need of a complete reference library is obvious.

Each of the laboratories in Berkeley—*anatomy, physiology and physiological chemistry, pathology and bacteriology*—contains a separate departmental library which, although a unit of the general University Library, is thus segregated as part of the working equipment of each department. Through the generosity of Mrs. Phoebe A. Hearst and Mrs. William H. Crocker, these departmental libraries are unusually complete; they also participate in the annual distribution of University Library funds.

The library in connection with the University Hospital contains a good collection of text-books and monographs, which is now being rapidly increased through a special annual appropriation. The best current journals in French, German and English are on file.

### LABORATORIES AND CLINICAL OPPORTUNITIES

Medical instruction of the first two years is carried on in the separate departmental buildings of *Anatomy, Physiology and Physiological Chemistry, and Pathology and Bacteriology* situated on the University Campus in Berkeley. The present laboratory buildings are regarded as temporary but are spacious and easily increased in size to meet growing demands; they are fully equipped not only for teaching but for research.

Instruction in *pathology* in its more practical relations to clinical medicine is pursued during the third and fourth year courses. *Clinical Pathology* is taught in the second semester of the second year. This course in the coming year is given in the laboratories of the Dental School as the space in the hospital building has been devoted to small laboratories for students and internes.

## THE UNIVERSITY HOSPITAL

The University Hospital is essentially a teaching hospital under the control of the Board of Regents of the University of California. The medical affairs of the hospital are in charge of a committee composed of the heads of the various clinical departments; this arrangement secures the most thorough utilization of the patients for the purpose of instruction.

At present the Hospital contains 112 beds. Three wards on the second floor are devoted to Medicine, Surgery, and Gynecology. Accommodations are provided on the third floor for obstetrical patients and for children. An endowment fund and the support of the University makes free beds available for the study of interesting and unusual cases. The Associated Charities of San Francisco send to the hospital a number of deserving patients. Clinical material also is drawn from distant points. It is aimed to make this hospital a consulting place, to a great extent, for physicians of the State, a place where patients unable to pay for costly examinations or expert opinion may be sent for further investigation, returning to their own physicians with a report of the findings.

In order to increase laboratory and teaching facilities the training school for nurses has been removed from the hospital and installed temporarily in a separate building pending the erection of a nurses' home adjacent to the new hospital.

## THE NEW UNIVERSITY HOSPITAL

Friends of the University have contributed six hundred and twenty-five thousand dollars for the erection of a Hospital which will be located at Parnassus and Fourth Avenues, adjoining the Medical School. This site overlooks Golden Gate Park, San Francisco Bay, and the Ocean, and provides a unique opportunity for hospital construction. The plans which have been accepted were submitted by Mr. Lewis P. Hobart, Architect, and Dr. Winford H. Smith, Superintendent of the Johns Hopkins Hospital. The work of construction will begin shortly.

The Hospital will have a capacity of 210 beds, of which fifty are assigned to each of the following services, Medicine, Surgery, Obstetrics and Gynecology, and Pediatrics. There is also an isolation ward of ten beds. Corresponding to the above services the Hospital contains four distinct units and these occupy separate two-story buildings which connect with a Main Building. This last extends along Parnassus Avenue and consists of four floors besides the basement and sub-basement. The four floors are devoted respectively, (1) to Administration and Lecture Rooms, (2) Operating Rooms, (3) Actinography, Photography, and Laboratories, and (4) Special Rooms for patients.

As the investigation of obscure diseases and the instruction of Medical Students and Postgraduates are two of the chief aims of the Hospital, facilities for these purposes have been carefully provided. Each ward has a neighboring laboratory and teaching room, in addition to those in the Main Building. There are four operating rooms including a large amphitheatre and three smaller operating rooms assigned, respectively, to General Surgery, Gynecology and Obstetrics, and the Surgical Specialties. The approach to these for the use of students is separated from the corridors and rooms used for the transportation and the preparation of patients,—an arrangement which possesses great advantage for both students and the staffs of the operating rooms. Similarly throughout the Hospital its efficiency as a teaching institution has been kept paramount.

The plans are such that the capacity of the Hospital may be doubled at comparatively small expense.

#### THE SAN FRANCISCO HOSPITAL

(Formerly City and County Hospital)

The San Francisco Hospital, temporarily located at the Almshouse tract and within walking distance of the University Hospital, assigns approximately one hundred beds (exclusive of tuberculosis wards) to the Medical School. These are equally divided for the instruction of clinical medicine and clinical surgery. A clinical laboratory for the use of the students and abundant post mortem material are also facilities afforded at this hospital.

The main buildings of the new San Francisco Hospital will be ready for occupancy about January 1, 1915. The tuberculosis and contagious pavilions will be finished at a later date. The main group, consisting of an executive building, service building, receiving and emergency building and sixteen wards, comprises one of the finest municipal hospitals in America, and represents the latest ideas in hospital construction and equipment. These wards will be devoted largely to acute medical and surgical cases, and will offer unexcelled opportunities for clinical work.

#### OUT-PATIENT DEPARTMENT

The Out-Patient Department of the University Hospital provides facilities for instruction in all branches of clinical medicine and surgery. Diseases of every type are treated in the various clinics, each of which is under the supervision of a Chief who is responsible for the instruction of students.

During the Third and Fourth Years groups of students are assigned to the Clinics in Medicine, Surgery, Gynecology, Pediatrics, Dermatology, Urology, Ophthalmology, Laryngology, Orthopedic Surgery, etc. A large

and varied material is available, and all the clinics are growing steadily; an increase of 54 per cent in the number of patients treated occurred last year. At present the daily average number of visits to the clinic is over 140.

The Social Service Work established in connection with the Out-patient Department has notably increased its efficiency. The social condition of patients often bears a direct relation to their physical ailments and, therefore, must be taken into account, if treatment is successful. Medical students should have this fact impressed upon them. The investigation of social problems presented by patients in the Out-Patient Department as well as in the Hospital Wards is made under the direction of Doctor Louise Morrow, who brings to the work a knowledge of both Medicine and Sociology. Students are advised to attend the conferences dealing with the social problems that arise in connection with the patients they see in the clinic. These conferences are held weekly by Professor Lucas, Director of the Out-Patient Department.

#### TUBERCULOSIS CLINICS

By agreement with the San Francisco Society for the Study and Prevention of Tuberculosis Dr. Eduardo Taussig, a member of the out-patient staff of the University Hospital, is in charge of a clinic maintained under the auspices of this society. Patients referred there for treatment are available for teaching purposes. The tuberculosis wards of the San Francisco Hospital are also utilized for the same purpose.

#### THE CANCER WARD

Through the generosity of a friend of the Medical School a ward in the hospital is reserved for the treatment of patients suffering from malignant diseases. Advanced and inoperable cases are received as well as those not too far advanced to be benefitted by surgical or other treatment. Thus, the variety of cases and the long residence of certain of them afford an unusual opportunity to observe all phases of malignant diseases.

#### THE HOOVER INSTITUTE FOR MEDICAL RESEARCH

This Institution is located in an adjoining building to the Hospital and its Director is also Professor of Research Medicine in the Medical School. A number of beds in the Hospital are at the disposal of the Institute and are occupied by patients suffering from diseases which at the moment are the subject of study and investigation by members of the Institute Staff.

Professor Whipple and his associates offer elective courses to the Fourth Year Class and a limited number of students may undertake research problems. The selection of such students will depend upon their fitness for this work. Opportunities also will be afforded graduates in medicine who wish to enter upon a career of research.

#### THE SHEFFIELD SANBORN SCHOLARSHIP

Through the generosity of Mrs. Frances B. Sanborn, one of the three scholarships known as the Sheffield Sanborn Scholarships has been assigned to the Medical School. This scholarship yields \$250 per annum at present and is open only to students who have not yet received the degree in Medicine and who otherwise would not have the opportunity to acquire a University training. Applications for this scholarship should be filed with the Recorder of the Faculties by March 20th of each year. A blank form of application may be obtained from the Recorder of the Faculties at Berkeley.

#### HOSPITAL APPOINTMENTS

Internships in the University Hospital are open to eight graduates of the University of California Medical School or some other approved medical school. Internes serve for one year, without salary. The appointments are made by the Hospital Committee who take into account both the character of the work of the candidate and his general fitness.

Internships in the San Francisco Hospital also are awarded to three members of the graduating class. Positions in some of the private hospitals in San Francisco are filled annually either upon recommendation of the Medical Faculty or by competitive examination.

This year the Regents of the University have provided positions at the University Hospital for a resident in Medicine, Surgery, Obstetrics and Gynecology, and Pediatrics. These appointments, not necessarily limited to one year, are open to graduates in medicine who have had previous hospital experience and possess suitable qualifications for the work. Each position carries with it a salary of \$600 a year, and accommodations in the hospital.

# **PLAN OF INSTRUCTION AND ANNOUNCEMENT OF COURSES**





## PLAN OF INSTRUCTION

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### GENERAL STATEMENT

As with other departments of the University, instruction in the Medical School extends from the middle of August to the middle of May. The academic year is divided into semesters of sixteen weeks' duration. The first semester extends from August to the Christmas recess; the second from January to the close of the academic year.

The chief aim of the School is to develop medical practitioners and to offer facilities which will enable qualified students to prepare themselves for special medical work. The faculty is in sympathy with the principle which allows the student great freedom in choosing the direction his studies shall take. A system of instruction has been inaugurated which will permit wide choice in selecting the fourth year work. This radical departure from the old order, which required all students to pursue one and the same course, could not be effected suddenly, and at present, therefore, the amount of time allotted electives is somewhat less than will ultimately become available.

The course of instruction is in harmony with the principles adopted by the Association of American Medical Colleges. Following the terminology employed by that Association the amount of work required in various subjects is indicated by the number of hours devoted to them. But in the case of the fundamental sciences—Anatomy, Physiology, Biological Chemistry, Pharmacology, Pathology, and Bacteriology—the courses are also assigned a "unit" value such as other departments of this University employ. This expression is used since, under certain conditions, the subjects mentioned may be elected by non-medical students to fulfill the requirements for degrees other than the medical. In so far as the courses required for medical students are concerned, these units have no particular significance. The elective courses in these departments, however, may be taken by medical students in fulfilling requirements for a Master's degree, and the required courses may be counted in the combined course as fulfilling units for the B.S. degree, as well as part of the work for the M.D. degree.

In general, the University has adopted, as a standard, a unit of sixteen hours of didactic teaching, or forty-eight hours of laboratory work. The unit of demonstrative or clinical teaching occupies a middle ground of thirty-two hours. Thirty-two units represent the work of the average year. Exceptional students can carry two to four units more.

In general, the four years curriculum leading to the degree of Doctor of Medicine falls into three periods. First, that devoted to the fundamental medical sciences. Second, that occupied by clinical instruction. And, third, the elective period.

As the requirements for admission are such that the student enters after he has received training in physics, inorganic and organic chemistry, and biology, these subjects are not taught in the medical school. The first period of instruction covers three semesters and is devoted to anatomy, histology, physiology, biological chemistry, bacteriology, and pathology. Nearly all the work in these subjects is obligatory. They provide the basis for the study of clinical medicine; and the laboratory instruction which occupies the major portion of the student's time during this period is planned to develop powers of accurate observation.

Clinical instruction begins with the second semester of the second year. The initial courses in medicine and surgery deal chiefly with the problems of diagnosis. They aim to train further the faculty of critical observation and to instill into the student good habits in taking case histories and in carrying out systematically the examination of patients. In this semester, also, *materia medica*, pharmacology, and hygiene are taught.

Obligatory clinical instruction continues through the third year, and is given in the class-room, the clinical laboratory, the dispensary, and at the bedside. In the Out-Patient Department students take the histories of patients and make the necessary examinations under the direction of the attending staff. In the wards of the University Hospital and the San Francisco Hospital they are assigned cases for thorough study and have every opportunity to become familiar with therapeutic methods. During the first semester of the fourth year the required work in medicine, surgery, obstetrics, gynecology, pediatrics and the various specialties will be completed.

At present the elective period of the fourth year consists of only the second semester but eventually will include the first semester. All departments of the School offer optional work, and in general three possibilities are open to the student: (a) He may elect a number of short courses with a view to becoming a general practitioner. (b) He may select a few long courses looking toward a career in some special field of practice. (c) He may devote his time to the laboratories of the fundamental sciences for the purpose of training as a teacher and investigator.

**ARRANGEMENT OF STUDIES, 1914-1915**

**FIRST YEAR**

<i>Subject</i>	<i>Total Hours Required</i>
<b>First Semester:</b>	
Histology .....	192
Anatomy .....	512
	<hr/>
	704
<b>Second Semester:</b>	
Neurology .....	80
Physiology .....	336
Biochemistry .....	272
	<hr/>
	688

**SECOND YEAR**

<b>First Semester:</b>	
Topographical Anatomy .....	64
Morbid Anatomy and Histopathology .....	224
Bacteriology and Immunology .....	288
Electives .....	32
	<hr/>
	608
<b>Second Semester:</b>	
Hygiene .....	16
Pharmacology .....	96
Materia Medica, etc. ....	48
General Medicine and Clinical Pathology.....	240
Pediatrics .....	16
Neurology .....	16
Dermatology .....	16
General Surgery .....	112
Ophthalmoscopy .....	16
	<hr/>
	576

*Medical School***THIRD YEAR**

<i>Subject</i>	<i>Total Hours Required</i>
<b>First Semester:</b>	
Hygiene .....	16
Dietetics .....	16
Therapeutics .....	16
General Medicine and Clinical Pathology.....	192
Pediatrics .....	48
Neurology .....	32
Legal Medicine .....	16
Dermatology .....	16
General Surgery .....	112
Ophthalmology .....	48
Obstetrics and Gynecology .....	112
	<hr/> 624

**THIRD YEAR**

<b>Second Semester:</b>	
*Hygiene .....	16
*Materia Medica, etc. ....	48
Therapeutics .....	32
General Medicine .....	112
Pediatrics .....	64
Neurology and Psychiatry .....	48
Legal Medicine .....	8
Dermatology and Syphilis .....	32
General Surgery .....	144
Ophthalmology .....	16
Laryngology, etc. ....	48
Obstetrics and Gynecology .....	96
	<hr/> 664

\* Owing to a change in curriculum there is an apparent duplication in the second and third and also in the third and fourth year courses during 1914-15.

FOURTH YEAR

<i>Subject</i>	<i>Total Hours Required</i>
<b>First Semester:</b>	
General Medicine .....	160
*Pediatrics .....	96
*Neurology .....	64
*Dermatology .....	16
General Surgery .....	128
Orthopedic Surgery .....	56
Urology .....	56
Gynecology .....	96
Roentgenology .....	16
	<hr/>
	688
 <b>Second Semester:</b>	
*Psychiatry .....	16
*Legal Medicine .....	8
Electives .....	560
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	584

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\* Owing to a change in curriculum there is an apparent duplication in the second and third and also in the third and fourth year courses during 1914-15.

## DEPARTMENTS OF INSTRUCTION

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### ANATOMY

ROBERT ORTON MOODY, B.S., M.D., Associate Professor of Anatomy.

RICHARD W. HARVEY, M.S., M.D., Assistant Professor of Anatomy.

PHILIP E. SMITH, Ph.D., Instructor in Anatomy.

IRENE PATCHETT SMITH, M.S., Assistant in Anatomy.

FELIX H. HURNI, B.S., Assistant in Anatomy.

EDWARD MILLER, Technical Assistant.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

### MICROSCOPIC ANATOMY

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly con-

sidered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens.

**101. Histology and Microscopic Organology.**

Dr. SMITH and Mr. HURNI.

In this course are considered the anatomy of the cell, its variations in form, the conditions and processes of its proliferation, and the modifications which result in its differentiation into a cell of specialized type. The formation of the embryonic germ layers is then taken up and followed by a detailed study of the different fundamental tissues of the body, as these are composed of cells and cell products and derived from one or the other of the germ layers. The study is always comparative. The organs are discussed with reference to their form, arrangement, and the number of the fundamental tissues composing them, with special reference to their structural and functional relations to other organs. In each case the students begin their study with the structures *in situ*, and special effort is made to bridge the gap between the appearance of the organs in gross and under the microscope.

First year, first semester, 3 laboratory periods, 3 lectures a week. M  
W, 8-12; F, 8-11; S, 11-12. 6 units.

**103. Neurology and the Sense Organs.** Assistant Professor HARVEY.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neurone studied in course 101 is used as the unit in the construction of the nervous system with a view of tracing the origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to the consideration of the growth and development of the nervous system.

First year, second semester. F, 8-9 and 1-5. 3 units.



**2. Histological Technique.****Mr. MILLER.**

Designed for those wishing to further familiarize themselves with the general and special methods of obtaining, fixing, embedding, sectioning, staining, and mounting material for microscopical examination. The course is optional. It cannot be substituted for required work. Hours to be arranged. Laboratory fee to cover cost of material, \$10.

**SYSTEMATIC HUMAN ANATOMY**

The laboratory method is largely used in giving the courses in systematic human anatomy, with occasional lectures and formal quizzes. An oral examination is required at the completion of the dissection of each part. Students are urged to work independently as far as possible. Special emphasis is laid upon the importance of the visual images rather than word pictures of the various structures of the body. The student dissects from the standpoint of the segment, and to a great extent looks upon the various structures as they are found in the body from the point of view of their comparative relationship and development. Topographical relations are shown by models and frozen or formalin-hardened sections. In order to emphasize the importance of original work, a series of statistical investigations is being constantly carried on by the students through the agency of tabulation charts on which they record the important variations found in their dissections. Special attention is paid to the variations of one particular part of the body.

**105. Head and Neck.**

Associate Professor MOODY and Assistant Professor HARVEY.

First year, first semester. Tu Th, 8-12; S, 8-11; M Tu W Th F, 1-5.

*3½ units.***106. Arm and Thorax.**

Associate Professor MOODY and Dr. SMITH.

First year, first semester. Tu Th, 8-12; S, 8-11; M Tu W Th F, 1-5.

*3½ units.***107. Leg and Abdomen.**

Associate Professor MOODY and I. P. SMITH.

First year, first semester. Tu Th, 8-12; S, 8-11; M Tu W Th F, 1-5.

*3½ units.*

**108. Regional and Topographical Anatomy.**

Associate Professor MOODY, Assistant Professor HARVEY, and I. P. SMITH.

Living models, special dissections and sections of the body are used in this course to enable the student to become more familiar with structural relations and to assemble information obtained in preceding dissections.

Second year, first semester. Sec. I, Tu 8-9, F 8-11; Sec. 2, Tu 9-10,  
Th 1-4. 3 units.

**109. Special Anatomy for Physicians and Advanced Students.**

Associate Professor MOODY and Assistant Professor HARVEY.

Hours to be arranged to suit applicants.

**ELECTIVES**

**210. Research.**

Associate Professor MOODY, Assistant Professor HARVEY and Dr. SMITH.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of members of the staff. The course also gives opportunity for those wishing to gain experience in special Histological Technique and in the construction of papers for publication. If the results obtained merit it, they will be published. To cover the cost of material, a laboratory fee of \$5 will be charged. *Hours optional.*

**211. Journal Club.**

Reviews of current anatomical literature will be presented by the students and discussed informally. This course will be open to all students but the membership will be limited in number. Those wishing to join should consult Professor Moody.

One hour a week, second semester.

**PHYSIOLOGY AND BIOCHEMISTRY**

SAMUEL STEEN MAXWELL, M.S., Ph.D., Associate Professor of Physiology.

T. BRAILSFORD ROBERTSON, Ph.D., Sc.D., Associate Professor of Physiological Chemistry.

THEODORE C. BURNETT, M.D., Assistant Professor of Physiology.

C. B. BENNETT, Ph.D., Instructor in Physiological Chemistry.

ROSALIND WULZEN, Ph.D., Instructor in Physiology.

DANIEL W. SOOY, Assistant in Physiology.

L. R. BEAUCHAMP, Technical Assistant.

The required courses are 103, 104 and 106. The remaining courses are open to those students who have the time and the preparation necessary to pursue them with profit.

Attention should be called to the fact that the equipment of the department offers unusual opportunities for research both in the Rudolph Spreckels Laboratory at Berkeley and in the Herzstein Research Laboratory at New Monterey.

The equipment in the Rudolph Spreckels Physiological Laboratory comprises in addition to the apparatus and conveniences for the customary lines of work in mammalian physiology ample facilities for research in physiological chemistry and experimental biology. The department library contains complete sets of all the important physiological journals, and the more important monographs on physiological and related subjects. The Herzstein Research Laboratory at New Monterey offers facilities for the investigation of problems in marine biology.

**103. Biochemistry.** Associate Professor ROBERTSON and Dr. BENNETT.

In this course the foodstuffs are followed up from the moment that they are ingested to the moment when, after having circulated through the tissues and shared in their life, their final products are excreted from the body. The course may be considered as consisting of six parts, corresponding with various phases of the cycle of changes which the foodstuffs undergo. These divisions of the course are the following:

1. The foods; their properties, assimilation, and conversion into living matter or into reserve materials. The consideration of this phase of the subject takes the student to the point at which the foods have really become living matter or reserve-materials. This leads naturally to the second part of the subject, namely:

2. The manner in which the physical and chemical properties of the foods determine the properties of living protoplasm.

3. The correlation of the different activities of the tissues in so far as this is brought about by chemical agents which are distributed through the agency of the circulation.

4. The chemical phenomena which accompany or underlie the performance of function by living tissues.

5. The waste-products, their chemical nature, their derivation, and, to some extent, the method of excretion.

6. Regarding the entire body as a chemical machine, the efficiency of this machine is discussed and the relationship between the work it can perform and the nature of the fuel with which it is supplied.

First year, second semester. Lectures, M Tu W Th 1-2; F, 9-10; laboratory. M Tu W Th, 2-5. 9 units.

#### 104. **Physiology.**

Associate Professor MAXWELL, Assistant Professor BURNETT, and Dr. WULZEN.

The physiology of nerve, muscle, central nervous system, sensation, circulation, respiration and secretion. The lectures cover in a systematic way the general subject-matter of the topics stated above. Laboratory experiments are so arranged that the most important fundamental observations are repeated. Attention is given to technique as well as to results. Continual use of the reference library is insisted upon. In addition to the routine work required alike of all students, each member of the class is required to demonstrate some special piece of experimental work; the demonstration is accompanied by a paper by another student on the subject which the demonstration illustrates, and each of the two hands in a carefully prepared bibliography. Thus each student is responsible for one demonstration, one paper, and two bibliographies.

First year, second semester. Lectures, M Tu W Th S, 11-12, F, 10-11; laboratory, M Tu W Th S, 8-11.

#### 106. **Pharmacology.**

The physiological action of drugs, with illustrations derived from their therapeutic application, and practical demonstrations.

Second year, second semester. F, 6 hours weekly. 96 hours.

## ELECTIVES

210. **Experimental Biology.**

Dr. WULZEN.

Special problems in cell physiology and the tropisms. Open to properly qualified students.  
*Hours and credits by arrangement.*

211A. **Advanced Physiology.**

Associate Professor MAXWELL.

Some simple piece of research is repeated and extended in connection with a study of the original literature on the subject. Open to a few suitably prepared students.

Laboratory three afternoons a week, with occasional lectures and conferences.  
*4 units.*

211B. **Advanced Chemical Biology.**

Associate Professor ROBERTSON.

Special topics may be selected by the student in conference with the professor as subjects of advanced and intensive study.

212. **Research in Physiology.**

Associate Professor MAXWELL.

Hours, subjects and credits by arrangement with Professor Maxwell.

213. **Research work in Physiological Chemistry.**

Associate Professor ROBERTSON.

Open to students who have the necessary time at their disposal and who have the necessary training. The subject of the research and the time to be devoted to it to be arranged in conference with Professor Robertson.

## PATHOLOGY AND BACTERIOLOGY

FREDERICK P. GAY, A.B., M.D., Professor of Pathology.

KARL F. MEYER, A.B., D.V.M., Professor of Bacteriology and Protozoology.

GLANVILLE Y. RUSK, A.B., M.D., Assistant Professor of Pathology.

JEAN V. COOKE, A.B., M.D., Assistant Professor of Pathology.

EDITH J. CLAYPOLE, Ph.B., M.S., M.D., Research Associate in Pathology.

GRACE F. GRIFFITHS, B.S., Assistant in Bacteriology.

C. R. CHRISTIANSEN, M.D., Assistant in Bacteriology and Pathology.

Instruction in pathology and bacteriology is given in the Hearst Laboratory of Pathology and Bacteriology in Berkeley during the second year and at the University Hospital and the San Francisco Hospital during the third and fourth years.

The course in pathology aims to outline the natural history of disease. The instruction is for convenience divided into four correlated courses dealing respectively with causation, progress and effect.

**101. Bacteriology and Protozoology.**

Professor MEYER and Miss GRIFFITHS.

Bacteriological methods are first taught; the preparation of culture media, the isolation of bacteria in pure culture, and the morphology and cultural characteristics of bacterial species. The pathogenic bacteria are then taken up in relation to specific diseases. The lower animal parasites concerned in systemic diseases are then considered. Lectures are employed for outlining general principles, the work being largely practical.

Second year, first semester. M Tu W F, 1-5, alternating with course 102. 4 units.

**102. Infection and Immunity.** Professor GAY and Miss GRIFFITHS.

The course presents the most accessible aspects of functional pathology. It traces the evolution of infectious diseases in the body and the mechanism of animal defense. Experimental methods of studying infection are demonstrated and so far as practicable carried out by the student. A systematic course of lectures will outline the principles of immunology with a consideration of their applicability in the diagnosis and treatment of disease. These lectures, but not the laboratory work, may be taken by non-medical students who have had at least course 1 or 2.

Second year, first semester. Lectures M W, 11-12; laboratory M Tu W F, 1-5, alternating with course 101. 3 units.

**103. Morbid Anatomy and Histopathology.**

Assistant Professor RUSK and Dr. CHRISTIANSEN.

The organ and tissue changes in diseases in the animal and particularly in the human body will be studied in this course. Macroscopic lesions will be illustrated by fresh material from autopsies and museum specimens, and the microscopic appearances will be studied by means of a loan collection of prepared slides. Experimental lesions are used to emphasize the evolution of such processes. The course includes systematic instruction in the conduct of autopsies at the Alameda County Hospital at which the students assist in small groups. This course, while largely practical, is considered systematically in lectures and conferences.

Second year, first semester. M W Th S, 8-11. 6 units.

## ELECTIVES

202. **Research. Problems of Infection and Immunity.** Professor GAY.  
*Hours and units to be arranged.*
203. **Research. Neuropathology.** Assistant Professor RUSK.  
*Hours and units to be arranged.*
204. **Research. Bacteriology and Protozoology.** Professor MEYER.  
The investigation of concrete problems suggested by the work in  
medical bacteriology. *Hours and units to be arranged.*
205. **Advanced Morbid Anatomy and Histopathology.**  
Assistant Professor COOKE.  
An elective course for fourth year and graduate students in medicine,  
comprising autopsy technic and the working up of tissue and cul-  
tures resulting from post mortem examinations.  
Fourth year, second semester. University Hospital.  
*Hours and units to be arranged.*
206. **Seminar in Pathology.** The STAFF.  
Reports and discussions of current advances and individual research  
in the field covered by the department. Open to Medical Students  
and Graduate Students.  
Throughout the year, beginning September 1. Alternate Tu, 8 P.M.  
*No credit*
207. **Experimental Pathology.**  
Assistant Professor RUSK and Dr. CHRISTIANSEN.  
An elective course to which a limited number (not over six) especially  
qualified students will be admitted. Experiments illustrating func-  
tional changes as evidenced by chemical and physiological methods  
and tissue alterations will be undertaken and the results demon-  
strated to those in Pathology 103, which latter course it is intended  
to supplement. Special problems may also be undertaken. This  
course may also be taken as a graduate course by special arrange-  
ment.
208. **Autopsy Course.** Assistant Professor COOKE.  
During the school year about 75 autopsies are performed at the  
University Hospital and the University of California Service of  
the San Francisco Hospital. Provision is made for students of  
the third and fourth years to attend these autopsies. Members of  
the third year class under supervision of Dr. COOKE perform the  
autopsies, correlate clinical and post-mortem findings, make gross  
descriptions of the lesions found and later describe the micro-  
scopic appearance of the tissues.

**HYGIENE AND PREVENTIVE MEDICINE**

**WILBUR A. SAWYER, A.B., M.D.,** Lecturer in Hygiene and Preventive Medicine.

**SECOND YEAR**

**101. Lectures and Demonstrations in Hygiene and Preventive Medicine.**

**Dr. SAWYER.**

The course in Hygiene, Public Health, and Preventive Medicine, through the courtesy of the State Board of Health, is given by Doctor SAWYER, Director of the State Hygienic Laboratory and is designed to meet the need of those who are to become medical practitioners. While fairly comprehensive in scope, it is not offered as a substitute for the especial training necessary to equip medical health officers. It does aim to emphasize the exact relations of the private practitioner to the public health. The scope of the course will include the following topics: The legal mechanism for the control of disease, vital statistics, transmissible diseases and their epidemiology, occupational diseases, milk supply in relation to public health, water supply and sewage disposal, food supply, meat inspection, disinfection, economic cost of diseases, saving through conservation, etc.

Second semester, once a week.

*16 hours.*

**THIRD YEAR**

**102A-102B. Lectures and Demonstrations in Hygiene and Preventive Medicine.**

**Dr. SAWYER.**

For description see Course 101. After this session the course will be given only in the second year.

First and second semesters, once a week.

*32 hours.*

**MATERIA MEDICA AND PRACTICAL THERAPEUTICS**

**EUGENE S. KILGORE, B.S., M.D.,** Instructor in Medicine.

**ALBERT SCHNEIDER, Ph.D., M.D.,** Instructor in Materia Medica.

**RENÉ BINÉ, M.D.,** Assistant in Medicine.

**SECOND YEAR**

**101. Lectures and Demonstrations in Materia Medica. Dr. SCHNEIDER.**

This course supplements the courses in Experimental Pharmacology and Therapeutics and will include lectures on the history of medical schools and cults; the source of drugs and medicines; newer



remedies; the principal drugs used in modern medicine; the quality and purity of drugs and medicines; federal and state laws governing the quality and purity of drugs; general toxicology; physiological antagonism; chemical incompatibility and prescription writing. Considerable attention will be given to the newer biological products used in medicine including a discussion of their manufacture, standardization and use. The work is to be supplemented by class demonstrations explaining the more important general pharmaceutical processes, methods of alkaloidal extraction, chemical and physiological drug assaying, etc. Some attention will also be given to posology, drug habits, and habit-forming drugs; and the so-called narcotic drugs with the laws governing their sale.

Second semester, three times a week.

48 hours.

### THIRD YEAR

#### 102. **Lectures and Demonstrations in Materia Medica.** Dr. SCHNEIDER.

For description see Course 101. After this session the course will be given only in the second year.

Second semester, three times a week.

48 hours.

#### 103A-103B. **Lectures and Recitations in Therapeutics.**

Drs. KILGORE and BINE.

Lectures, recitations, demonstrations and practical exercises on the medical treatment of disease. By the use of material in the wards, emphasis is placed upon the application of therapeutic principles. Students are required to write specific directions for patients and for nurses and to execute many of the orders themselves. Comparatively few drugs are used. These occupy an important but by no means exclusive place in the teaching. Special attention is given to biologic methods, to diet, hydrotherapy, massage and other physical and mechanical measures.

First semester, once a week; second semester, twice a week.

48 hours.

**MEDICINE\***

HERBERT C. MOFFITT, B.S., M.D., Professor of Medicine.  
WILLIAM WATT KERR, A.M., C.M., M.D., Clinical Professor of Medicine.  
GEORGE E. EBBRIGHT, M.D., Instructor in Medicine.  
HERBERT W. ALLEN, B.S., MD., Instructor in Medicine.  
EUGENE S. KILGORE, B.S., M.D., Instructor in Medicine.  
RENÉ BINE, M.D., Assistant in Medicine.  
JAMES LYMAN WHITNEY, A.B., M.D., Assistant in Medicine.  
LEROY H. BRIGGS, M.D., Assistant in Medicine.  
JULE B. FRANKENHEIMER, B.S., M.D., Assistant in Medicine.  
HARRY E. FOSTER, M.D., Assistant in Medicine.  
EDUARDO TAUSSIG, M.D., Assistant in Medicine.  
ELDRIDGE J. BEST, M.D., Assistant in Medicine.  
— — —, Assistant in Medicine.  
EARL H. CORNELL, B.S., M.D., Assistant in Medicine.  
HANS LISSER, A.B., M.D., Assistant in Medicine.  
MILTON ABRAHAMSON, M.D., Voluntary Assistant in Medicine.  
LOVELL LANGSTROTH, A.B., M.D., Voluntary Assistant in Medicine.  
JOHN H. CATTON, M.D., Voluntary Assistant in Medicine.

Instruction in Medicine is given both at the University Hospital and at the San Francisco Hospital.

At present students begin their work in this department at the University Hospital during the second semester of the second year. Two general introductory courses bridge the gap between the fundamental sciences and clinical medicine. Stress is laid upon instruction in history taking and physical diagnosis, and an endeavor is made to drill the student thoroughly at the very beginning in what may be termed a standard medical technic. This uniform technic in history taking, in recording physical and laboratory examinations will be applied in all the student's later dispensary and ward exercises and will be carried even farther into his work as clinical clerk and interne.

Pharmacology and Materia Medica also are taught in this semester, and thus students are prepared for their work in Therapeutics in the third year.

In the first semester of the session 1914-15 instruction in clinical medicine will be given the third year class at the University Hospital and the fourth year class at the San Francisco Hospital. In the second semester the fourth year class is offered elective courses at the University Hospital, while the third year receives clinical instruction at the San Francisco Hospital.

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\* The Department of Medicine includes Neurology and Dermatology.

A repetition of some of the courses given by this department is indicated in the following announcement. This is due to the fact that the curriculum is being changed to permit more elective work in the fourth year.

#### SECOND YEAR

##### 101. Propedeutics of Medicine.

Professor MOFFITT.

Lectures, demonstrations and recitations. Great emphasis will be laid upon cultivation of the student's power to observe. Obvious clinical phenomena or typical pictures of disease will be demonstrated at the beginning of the course, such as jaundice, pigmentation, cyanosis, edema, ascites, anemia, myxedema, Basedow's disease, tumors, peculiar gaits. Later on important symptoms as dyspnoea, vomiting, cough, pain, polyuria, etc., will be considered, with special reference to their physiological interpretation. Still later cases will be demonstrated (particularly cases of nervous disease, paralysis, muscle atrophies, disturbances of reflexes, brain tumors) that will serve to illustrate the relation of anatomical and physiological knowledge to clinical phenomena. Recitations from Osler's Text-Book of Medicine drill the student in medical terminology.

Second semester, twice a week.

32 hours.

##### 102. Physical Diagnosis and History Taking.

Drs. KILGORE, WHITNEY, BINE, and BRIGGS.

A few lectures on the method of history taking and on certain general chapters of physical diagnosis will be delivered to the entire class. Practical exercises in the wards and Out-Patient Department will be given to sections of not more than six. Cabot's Physical Diagnosis and Sahli's Untersuchungsmethoden will serve as textbooks.

Second semester (ten weeks), four times a week.

Each student, 80 hours.

##### 103. Clinical Physiology.

Dr. KILGORE.

Lectures, recitations and demonstrations. The object of these exercises is to point out at the beginning of the student's clinical experience some of the more direct practical applications of physiology. Special emphasis is laid upon those facts which have been learned by personal laboratory experimentation. Certain disorders of nervous and cardiac mechanism, hemodynamics, respiration, digestion, etc., are considered.

Second semester, twice a week.

32 hours.

**104. Clinical Pathology.**

**Drs. BRIGGS and FOSTER.**

Training in the chief laboratory methods used in the clinic. The student is taught to use in an efficient way knowledge already gained in his courses in physiology and pathology. Examinations are made of blood, urine, sputum, stomach contents, feces and of ascitic, pleural and cerebrospinal fluids. The material is derived from the medical wards and Out-Patient Department in which the student is at work so that emphasis can be laid upon the correlation of clinical and laboratory findings.

Second semester, twice a week.

*36 hours.*

**THIRD YEAR**

**105A-105B. Clinical Medicine.**

**Professor MOFFITT.**

Lectures, demonstrations, ward visits and quizzes. During the course of the year's instruction important diseases will be illustrated, as far as possible, by suitable cases. Interesting patients seen by the students in the Out-Patient Department can be taken into the wards and more carefully studied.

First and second semesters (U. C. H.), twice a week.

*64 hours.*

**106. Clinical Medicine.**

**Professor KERR.**

This course consists of clinics, clinical conferences, lectures and demonstrations upon the material in the medical wards of the San Francisco Hospital.

Second semester (S. F. H.), twice a week.

*32 hours.*

**107. Clinical Demonstrations and Recitations.**

**Dr. EBRIGHT.**

Students are assigned patients for observation and study. Subsequently, their findings are criticised by the instructor and the case is made the basis of a recitation.

Second semester (S. F. H.), once a week.

*16 hours.*

**108. Clinical Pathology.**

**Drs. BRIGGS and FOSTER.**

For description see Course 104. After this session the course will not be given in the third year.

First semester, twice a week.

*96 hours.*

**109. Dietetics.**

**Dr. BINE.**

A short course will be given on the physiology of nutrition and on the digestibility and nutrient values of the different foods, including the analysis of standard dietaries. Special attention will be paid to the use of foods in the treatment of nephritis, diabetes, nephro-

lithiasis, gout, obesity, undernourished states as well as to rectal feeding and the use of artificial foods. The practical application of these methods will be illustrated by the treatment of these diseases in the hospital wards, the senior students charting and keeping track of the diets in all cases. The dietetic treatment of such gastro-intestinal diseases as hyperacidity, anacidity, gastric ulcer, constipation, intestinal putrefaction will also be illustrated by ward cases.

First semester, once a week.

*16 hours.*

#### **110A-110B. Section Work in Wards and Out-Patient Department.**

**Drs. EBRIGHT, KILGORE, BINE, WHITNEY, BRIGGS, FRANKENHEIMER.**

Practical work in history taking and physical diagnosis to supplement the courses of the second year. Stress is laid upon the careful preparation of case records.

First semester (U. C. H.).

*Each student 64 hours.*

Second semester (S. F. H.).

*Each student 32 hours.*

### **FOURTH YEAR**

#### **111. Clinical Lectures and Demonstrations.**

**Professor KERR.**

This is a continuation of Course 106.

First semester (S. F. H.), twice a week.

*32 hours.*

#### **112. Clinical Demonstrations and Recitations.**

**Dr. EBRIGHT.**

This is a continuation of Course 107.

First semester (S. F. H.), once a week.

*16 hours.*

#### **113. Section Work at San Francisco Hospital.**

**Drs. EBRIGHT, FRANKENHEIMER, and CATTON.**

First semester.

*Each student 64 hours.*

#### **114. Ward Work at University Hospital.**

**The STAFF.**

Medical cases in the wards are assigned to the senior students. The student puts into practical use the knowledge gained in the third year in methods of history taking, physical and laboratory examinations, and differential diagnosis. The cases are worked up and recorded independently of the hospital records, handed in to the instructor and discussed informally.

First semester.

*Each student 48 hours.*

For electives in this department see page 76.

**CLINICAL NEUROLOGY AND PSYCHIATRY**

MILTON B. LENNON, A.B., M.D., Instructor in Neurology.

ROBERT L. RICHARDS, M.D., Lecturer in Psychiatry.

V. H. PODSTAT, M.D., Lecturer in Psychiatry.

EVA C. REID, M.D., Assistant in Psychiatry.

**SECOND YEAR**

**101. Elementary Clinical Neurology.**

Dr. LENNON.

Stress is placed particularly upon the method of taking neurological histories, of making the routine examination, and of interpreting the anatomical meaning of the clinical phenomena encountered.

Second semester, once a week.

16 hours.

**THIRD YEAR**

**102A-102B. Lectures and Demonstrations in Clinical Neurology.**

Dr. LENNON.

In addition to the didactic instruction which is illustrated by the projectoscope, ward-teaching is a feature of this course. Students are assigned cases for study and diagnosis. Their conclusions are criticised by the instructor.

First semester (U. C. H.), and second semester (S. F. H.), twice a week.

64 hours.

**103. Clinical Lectures in Psychiatry.** Drs. RICHARDS and PODSTAT.

In this course the more important mental diseases are selected for discussion. The early manifestations of insanity, the relation of specific organs to certain types of mental derangement, and the modern treatment of the insane receive particular emphasis.

Second semester, once a week.

16 hours.

**FOURTH YEAR**

**104. Lectures and Demonstrations in Clinical Neurology.** Dr. LENNON.

Organic and functional diseases of the nervous system are reviewed systematically. Illustrative cases are demonstrated.

First semester (U. C. H.), twice a week.

32 hours.

- 105. Clinical Lectures in Psychiatry.** Drs. RICHARDS and PODSTAT. 16 hours.  
 For description see Course 103. After this session the course will be offered only in the third year.  
 Second semester, once a week.
- 106. Section Work.** Dr. LENNON.  
 Students act as clinical assistants in the Out-Patient clinic.  
 First semester. Each student, 32 hours.  
 For electives in this department see page 77.

### DERMATOLOGY

HOWARD MORROW, M.D., Clinical Professor of Dermatology.  
 L. S. SCHMITT, B.S., M.D., Instructor in Dermatology.  
 A. W. LEE, M.D., Assistant in Dermatology.  
 F. S. ZUMWALT, M.D., Assistant in Dermatology.

Instruction in this department is carried on during the last semester of the second year and both semesters of the third year. In order that the work in this department be completed by the present fourth year class, instruction will be given to this class in the first semester of the 1914-15 session. In future work in the fourth year will be elective. During the third year students visit the San Francisco Isolation Hospital where leprosy, variola and varicella are demonstrated. Instruction is also given on the clinical aspects and the various laboratory procedures used in the diagnosis of syphilis.

### SECOND YEAR

- 101. Clinical Lectures and Recitations.** Professor MORROW. 16 hours.  
 Clinical lectures and demonstrations intended to teach the student to observe objective symptoms and describe them correctly. The common diseases of the skin will be demonstrated.  
 Second semester, once a week.

### THIRD YEAR

- 102A-102B. Clinical Lectures and Demonstrations** Professor MORROW. 32 hours.  
 A systematic course covering the histo-pathology, diagnosis and treatment of diseases of the skin.  
 First and second semesters, once a week.
- 103. Syphilis. Lectures and Recitations.** Dr. SCHMITT. 16 hours.  
 This course includes lectures, demonstrations and recitations on syphilis in all its phases. The clinical and laboratory procedures used in its diagnosis are also described.  
 Second semester, once a week.

**FOURTH YEAR**

**104. Clinical Demonstrations.**

Professor MORROW, Drs. LEE and ZUMWALT.

Students are trained in methods of history taking, diagnosis and treatment of dermatological patients. This course will not be given after the session 1914-15.

First semester, once a week.

16 hours.

For electives in this department see page 78.

**LEGAL MEDICINE**

A. A. D'ANCONA, A.B., M.D., Lecturer in Forensic Medicine.

In this department students receive instruction in the legal aspects of medicine. In general the course covers the following subjects: (1) Technique of medico-legal post-mortem examinations; (2) Toxicology from the chemical and legal points of view; (3) Biological aspects; and (4) Legal regulation of medical practice, rules of evidence, etc.

**101A-101B. Lectures.**

First semester, once a week; second semester, once a week (8 weeks).

24 hours.

**FOURTH YEAR**

**102A-102B. Lectures.** (After this session the course will be given only in the third year).

First semester, once a week; second semester, once a week (8 weeks).

24 hours.

**PEDIATRICS**

WILLIAM PALMER LUCAS, A.B., M.D., Professor of Pediatrics.

R. L. ASH, B.S. M.D., Instructor in Pediatrics.

ELLEN S. STADTMULLER, A.B., M.D., Assistant in Pediatrics.

ALFRED E. MEYERS, A.B., M.D., Assistant in Pediatrics.

ETHEL M. WATERS, A.B., M.D., Assistant in Pediatrics.

OLGA BRIDGMAN, A.M., M.D., Psychologist.

LOUISE MORROW, A.B., M.D., Social Service Worker.

The teaching material of the Department is drawn from the following hospitals:

(1) From the children's wards of the University Hospital and from the nursery of the Woman's Clinic. This gives an opportunity for studying normal breast feeding and the problems entering into



the first two weeks of infant life as well as the diseases of infancy and childhood which are admitted into the general children's wards. The Out-Patient Department which is used for sectional teaching during the fourth year gives an opportunity for following normal feeding cases which are referred from the Woman's Clinic after they are discharged from the hospital, and of the various ambulatory diseases of infancy and childhood which alone can be followed in the large Children's Clinic of the Out-Patient Department. The total number of visits last year in this clinic was 2760. (2) From the San Francisco Hospital children's wards. (3) From the Isolation Hospital, where every variety of contagious disease can be demonstrated. (4) Special trips will be made to the State Home for the Feeble-Minded and to other institutions dealing with children's welfare work.

Through close co-operation with the academic departments of the University opportunity is offered for work along the special lines of psychology, sociology and dietetics. These departments furnish assistants and lectures on special topics related to children. Through co-operation with state and city children's welfare institutions, an opportunity will be given to study the organization and work of these institutions.

#### SECOND YEAR

##### 101. **Lectures and Recitations.**

Professor LUCAS.

The course consists of lectures and clinical exercises dealing with the normal development of the infant, prenatal work, normal breast feeding, substitute feeding, physiology and metabolism of infancy, infant welfare work and other sociological phases of infancy and childhood. Special emphasis will be laid on preventive work in infancy and childhood.

Second semester, once a week.

16 hours.

#### THIRD YEAR

##### 102A-102B. **Lectures, Recitations, Laboratory Work and Clinical Demonstrations.**

Professor LUCAS and Staff.

The material for instruction is drawn from the children's wards of the University Hospital, the San Francisco Hospital and the Isolation Hospital (by courtesy of the San Francisco Board of Health and Dr. A. A. O'Neill). The course consists of lectures and clinical exercises dealing with the normal development of the infant, normal breast feeding, substitute feeding, dietetics of

early life, and the various diseases of childhood. Special attention is given to sociological, psychological, and preventive problems of infancy and childhood. The question of the defective, delinquent and psychopathic child will be discussed. Adolescence and the problems of internal secretion will be taken up during the second semester.

First semester, three times a week; second semester, twice a week.

*112 hours.*

#### FOURTH YEAR

##### 103. Section Work.

Professor LUCAS and Staff.

Classes are divided into small sections for work in the Out-Patient Department and in the wards.

First semester.

*Each student, 96 hours.*

For electives in this department see page 78.

#### SURGERY\*

WALLACE I. TERRY, B.S., M.D., Professor of Surgery.

HAROLD BRUNN, M.D., Instructor in Surgery.

SAXTON T. POPE, M.D., Instructor in Surgery.

DUDLEY TAIT, B.S., M.D., Assistant in Experimental Surgery.

MARY E. BOTSFORD, M.D., Assistant in Surgery.

LOUIS P. HOWE, M.D., Assistant in Surgery.

ANNA K. DAVENPORT, M.D., Assistant in Surgery.

HOWARD C. NAFFZIGER, M.S., M.D., Assistant in Surgery.

HERBERT S. THOMSON, B.S., M.D., Assistant in Surgery.

JEAN P. PRATT, A.B., M.D., Assistant in Surgery.

———, Assistant in Surgery.

CARL LESLIE HOAG, M.S., M.D., Voluntary Assistant in Surgery.

Instruction in surgery begins in the second semester of the second year. It is aimed to give the student a broad view of the subject, to instill principles of surgical technic and to establish a foundation by means of a course in surgical pathology. The work of this semester is confined to the University Hospital and Out-Patient Department.

Instruction is carried through the third year and the first semester of the fourth year. Material for these years is drawn from the University Hospital, the Out-Patient Department, and the San Francisco Hospital.

The work of the second semester of the fourth year is elective.

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\* The Department of Surgery includes Orthopedic Surgery, Urology, Laryngology, Ophthalmology and Roentgenology.

**SECOND YEAR****101. Elementary Surgery. Lectures, Demonstrations and Recitations.****Professor TERRY.**

A course of lectures, recitations and demonstrations covering the principles of surgery. Asepsis, antisepsis, the process of repair, surgical infections, thrombosis and embolism, wounds and tumors will be among the subjects discussed. These subjects will be illustrated when possible by patients.

Second semester (U. C. H.), once a week.

*16 hours.***102. Surgical Technic.****Dr. POPE.**

A practical course in the use of instruments, suture materials and surgical appliances, with particular reference to the development of an aseptic technic.

Second semester (U. C. H.), once a week.

*16 hours.***103. Surgical Pathology.****Dr. PRATT.**

A lecture and laboratory course in the study of tissue growth and repair, inflammation and tumors.

Second semester (U. C. H.), twice a week.

*32 hours.***104. Section Work.****Drs. POPE and THOMSON.**

This course will be given in the Out-Patient Department and in the wards of the University Hospital and will include practical instruction in the diagnosis of minor surgical conditions, history taking, bandaging, the dressing of wounds and the technic of minor operations.

Second semester, four times a week (6 weeks).

*Each student, 48 hours.***THIRD YEAR****105A-105B. Surgical Lectures, Demonstrations and Recitations.****Professor TERRY.**

A systematic course covering general, special, regional and operative surgery. Clinical material will be utilized as much as possible to illustrate the lectures.

First and second semesters (U. C. H.), twice a week.

*64 hours.*

**106. Clinical Demonstrations.**

**Dr. BRUNN.**

A conference course in which selected cases will be brought before the class and the etiology, diagnosis, prognosis, pathology and treatment discussed. These cases will be presented by students who have previously studied them.

Second semester (S. F. H.), once a week.

*16 hours.*

**107. Surgical Physiology.**

**Dr. POPE.**

Lectures and demonstrations in the physiology of respiration and circulation as related to surgery, the study of shock and the effects of anesthetics.

Second semester (U. C. H.), once a week.

*16 hours.*

**108A-108B. Surgical Pathology.**

**Dr. PRATT.**

For description see Course 103. After this session the course will be given only in the second year.

First semester, once a week; second semester, twice a week.

*48 hours.*

**109A-109B. Surgical Recitations.**

**Drs. POPE and NAFFZIGER.**

A systematic course based in part on the work given in course 105A-105B.

First and second semesters, once a week.

*32 hours.*

**110. Neurological Surgery.**

**Dr. NAFFZIGER.**

A lecture and demonstration course having special reference to the physiology and the surgical diagnosis of diseases of the nervous system. The surgical treatment will be briefly considered.

First semester, once a week.

*16 hours.*

**111A-111B. Section Work.**

**Drs. BRUNN, HOWE, NAFFZIGER, THOMSON, and PRATT.**

The class will be divided into sections for work at the University Hospital and San Francisco Hospital.

First semester (U. C. H.).

*Each student, 32 hours.*

Second semester (S. F. H.).

*Each student, 32 hours.*

**FOURTH YEAR**

**112. Surgical Lectures, Demonstrations and Recitations.**

**Professor TERRY.**

A continuation of course 105A-105B.

First semester (U. C. H.), twice a week.

*32 hours.*

**113. Clinical Demonstrations.**

Dr. BRUNN.

A continuation of Course 106.

First semester (S. F. H.), once a week.

*16 hours.***114. Surgical Section Work.**

Drs. BRUNN, HOWE, and NAFFZIGER.

Part of the work in this course will be in the wards where cases will be assigned for study and conference discussion. If the cases be operative the students will assist at the operations and follow the after-treatment.

First semester (S. F. H.).

*Each student, 32 hours.***115. Surgical Wards.**

Dr. PRATT.

Cases will be assigned to students, who will write histories, make physical examinations and do the necessary laboratory work. The students will assist in operations which may be performed on these patients and will follow the after-treatment. The administration of anesthetics will also be permitted under supervision. In other words, the students will act as surgical externes.

First semester (U. C. H.),

*Each student, 48 hours.***116. Roentgenology.**

Dr. DAVENPORT.

This course covers a general outline of radiology and radiotherapy and will be made as practical as possible.

First semester (U. C. H.), once a week.

*16 hours.*

For electives in this department see page 78.

**ORTHOPEDIC SURGERY**

WALTER I. BALDWIN, B.S., M.D., Assistant in Orthopedic Surgery.

CARL C. CRANE, M.D., Assistant in Orthopedic Surgery.

HOWARD H. MARKEL, M.D., Assistant in Orthopedic Surgery.

The courses in this department will be given in the first semester of the fourth year. Instruction consists of lectures, clinical demonstrations and section work in the wards and Out-Patient Department of the University Hospital.

**101. Lectures and Clinical Demonstrations.**

**Dr. BALDWIN.**

In general this course is planned to cover the more common deformities consequent to bone, joint, nerve and congenital lesions, with the laws governing their development. At this time also is considered the mechanical problems involved in the prevention and cure of deformity.

First semester, once a week.

*16 hours.*

**102. Section Work.**

**Drs. BALDWIN, CRANE, and MARKEL.**

First semester (U. C. H.).

*Each student, 40 hours.*

For electives in this department see page 79.

**LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY**

**ALBERT J. HOUSTON, B.L., M.D.,** Instructor in Laryngology, Otology and Rhinology.

**FREDERICK C. LEWITT, B.S., M.D.,** Assistant in Laryngology, Otology and Rhinology.

**ABEL W. JOHNSON, A.M., M.D.,** Assistant in Laryngology, Otology and Rhinology.

**ALLAN E. PECK, M.D.,** Assistant in Laryngology, Otology and Rhinology.

The required work of this department is given in the third year and in the first semester of the fourth year. The major portion of this work is practical and is carried on in association with regular recitations in the Out-Patient Department of the University Hospital. The use of the various instruments is also taught.

The work in the second semester of the fourth year is elective.

**THIRD YEAR**

**101. Clinical Lectures.**

**Dr. HOUSTON.**

This course is intended to give continuity to the clinical work in the Out-Patient Department.

Second semester (U. C. H.), once a week.

*16 hours.*

**102. Section Work.**

**Drs. HOUSTON, JOHNSON, and PECK.**

The class is divided into sections for work in the Out-Patient Department.

Second semester (U. C. H.).

*Each student, 32 hours.*

For electives in this department see page 80.

**OPHTHALMOLOGY**

WALTER SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.

WILLIAM F. BLAKE, A.B., M.D., Instructor in Ophthalmology.

EDGAR W. ALEXANDER, B.S., M.D., Instructor in Ophthalmology.

EDWARD F. GLASER, M.D., Assistant in Ophthalmology.

It is aimed to acquaint the student with the use of the ophthalmoscope in his second year in the Medical School. This is followed, in the third year, by systematic lectures and recitations covering the more common diseases of the lids and globes. Section work in the Out-Patient Department, with especial attention to differential diagnosis, is given in the third year. In the fourth year work in this department is elective.

**SECOND YEAR****101. Ophthalmoscopy.**

**Dr. BLAKE.**

A preparatory course intended to teach the use of the ophthalmoscope.

Second semester (U. C. H.), once a week.

*16 hours.*

**THIRD YEAR****102A-102B. Lectures and Recitations.**

**Dr. FRANKLIN.**

A systematic course of lectures and recitations covering the more common diseases of the lids and globes.

First and second semesters (U. C. H.), once a week.

*32 hours.*

**103. Ophthalmoscopy.**

**Dr. ALEXANDER.**

For description see Course 101. After the session 1914-15 this course will be given in the second year only.

**104. Section Work. Drs. FRANKLIN, BLAKE, ALEXANDER, and GLASER.**

The class will be divided into sections for work in the Out-Patient Department.

First semester (U. C. H.).

*Each student, 16 hours.*

For electives in this department see page 80.

## UROLOGY

W. P. WILLARD, M.D., Instructor in Urology.  
J. V. LEONARD, Assistant in Urology.

Work in this department will consist of didactic lectures, clinical work in diagnosis and treatment of patients in the wards and Out-Patient Department of the University Hospital. Demonstrations will be given in endoscopy, cystoscopy, and ureteral catheterization, and the application of renal functional tests.

Material of interest at the San Francisco Hospital will also be demonstrated.

One morning a week will be devoted to the discussion and demonstration of the surgery of the urinary organs.

## FOURTH YEAR

101. **Didactic Lectures on Genito-urinary Diseases.** Dr. WILLARD.  
First semester (U. C. H.), once a week (11 weeks). 11 hours.
102. **Lectures on Surgical Kidney Diseases and Functional Tests.**  
Dr. WILLARD.  
First semester (U. C. H.), once a week (5 weeks). 5 hours.
103. **Section Work.** Drs. WILLARD and LEONARD.  
The class will be divided into sections for work in the Out-Patient Department.  
First semester (U. C. H.). Each student, 40 hours.  
For electives in this department see page 80.

## OBSTETRICS AND GYNECOLOGY

J. MORRIS SLEMONS, A.B., M.D., Professor of Obstetrics and Gynecology.  
ARTHUR H. MORSE, A.B., M.D., Instructor in Obstetrics and Gynecology.  
WILLIAM G. MOORE, M.D., Instructor in Gynecology.  
LOUIS I. BREITSTEIN, B.S., M.D., Instructor in Obstetrics.  
FRANK TOPHAM, M.D., Assistant in Obstetrics.  
WALTER E. LIBBY, A.B., M.D., Assistant in Obstetrics and Gynecology.

Instruction in this department is given to third and fourth year students. The work of the third year is obligatory; that of the fourth year\* is elective. The required courses include lectures, recitations, laboratory demonstrations, and practical work in the wards and Out-Patient Department.



In general the required work is divided into three parts. During the first semester instruction is given in the normal anatomy and physiology of the female generative organs, including normal pregnancy, labor and the puerperium. During the second semester the courses deal on the one hand with obstetrical complications, and on the other hand with gynecological diseases. This logical arrangement may be strictly adhered to, for the instruction in both gynecology and obstetrics is given by the same department; and there results an elimination of much repetition and an economic use of the student's time.

The Woman's Clinic of the University Hospital which includes both obstetrical and gynecological patients offers a similar opportunity to combine clinical instruction in these subjects and demonstrates the close relationship between them, illustrated by conditions such as sterility, malpositions of the uterus, extra-uterine pregnancy, the injuries due to childbirth, etc.

The clinical opportunities afforded in the wards and dispensary of the University Hospital are supplemented by an Obstetrical and Gynecological service at the San Francisco Hospital which are under the supervision of members of this Department. The latter material is utilized in connection with the elective work offered fourth year students.

\* During this session (1914-15) fourth year students are required to take the courses indicated later in this announcement; but in the future only optional courses will be offered in the fourth year.

### THIRD YEAR

#### 101. Lectures and Recitations in Obstetrics. Professor SLEMONS.

This course deals with menstruation, ovulation, the physiology of pregnancy, the mechanism of labor, and the phenomena of the lying-in period.

First semester, three times a week.

48 hours.

#### 102. Gynecological Pathology. Dr. MORSE.

Students are supplied a series of slides illustrating the microscopic appearance of (1) the normal genitalia, (2) the anatomical changes which take place during pregnancy, and (3) the pathological lesions of the vagina, uterus, tubes and ovaries. The demonstration of these specimens is preceded by a short talk on the topic of the day's study, which is illustrated with the projector.

First semester, once a week.

32 hours.

- 103. Ward Classes.** Professor SLEMONS and Dr. LIBBY.  
Practical instruction in abdominal palpation, pelvimetry, the care of puerperal women, and of the newborn infant.  
First semester, once a week. 32 hours.
- 104. Pathology of Pregnancy, etc.** Drs. MORSE and BREITSTEIN.  
Complications of the Reproductive Process are reviewed systematically in a series of recitations based upon a standard textbook and illustrated by the experience of the University Clinic.  
Second semester, twice a week. 32 hours.
- 105. Operations with the Manikin.** Dr. MORSE.  
Students are taught the use of the forceps and the technique of other procedures in operative obstetrics.  
Second semester, once a week. 32 hours.
- 106. Lectures and Recitations in Gynecology.** Professor SLEMONS.  
While based upon a standard gynecological text-book this course singles out for emphasis the subjects which have not been considered in the preceding courses. The clinical manifestations, diagnosis and treatment of gynecological diseases are considered more particularly, for the student has already become acquainted with their pathology. (Course 102).  
Second semester, twice a week. 32 hours.
- 107. Practical Instruction.** THE STAFF.  
Instruction is given in the technique of obstetrical and gynecological examinations. Each student must attend at least ten cases of confinement. Clinical instruction in gynecology is given in the wards and dispensary and students may witness gynecological operations both at the University Hospital and the San Francisco Hospital.  
Students individually throughout the year.

#### FOURTH YEAR

- 108. Lectures and Recitations in Gynecology.** Dr. MOORE.  
A systematic review of diseases of women, including congenital anomalies, menstrual disorders, infections and tumors of the pelvic organs, etc.  
First semester, twice a week. 32 hours.

**109. Conferences.**

Professor SLEMONS.

Demonstrations in the ward, operating room and laboratory; the discussion of groups of cases; and reports on the current literature in obstetrics and gynecology.

First semester, once a week.

32 hours.

**110. Section Work.**

THE STAFF.

Students serve as assistants in the Out-Patient Department.

First semester.

Each student, 32 hours.

For electives in this department see page 80.

**FOURTH-YEAR ELECTIVES**

For the session of 1914-15 the last semester of the fourth year has been set aside for electives. A minimum of 560 hours is demanded. Electives are arranged as double-courses, single-courses, half-courses, and quarter-courses. A *double-course* occupies the entire day for one month or forenoons or afternoons for two months, and has a value of 140 hours. A *single-course* occupies a half day for one month and has a value of 70 hours. A *half-course* occupies two hours per week and has a value of 32 hours, and a *quarter-course* occupies one hour per week and has a value of 16 hours per semester.

Students wishing to specialize in any major branch of medical study may elect more than one of the courses offered in a given subject, but no student will be allowed to devote his whole elective period to one subject without special permission of the Executive Committee of the Faculty and the consent of the head of the department concerned.

Students electing research work which necessarily is prolonged beyond the time designated for that subject, will be permitted to finish it provided the time required does not extend beyond the semester. The permission of the Executive Committee of the Faculty will be necessary to carry out this arrangement.

The final choice of electives must be left at the secretary's office on or before December 1, 1914. No changes will be allowed after the final arrangement is made. The time allotted for electives, together with the schedule thereof, must be determined by the Secretary of the Faculty, and the Faculty reserves the right to make any changes deemed necessary in the selection and arrangement of the courses chosen by the student.

Examinations will be held at the end of each course, for the most part practical, and the grade assigned to each student will be sent to the secretary's office as soon as the course has terminated.

The value of the courses, as stated above, when elected in anatomy, physiology, and pathology and bacteriology, must depend on arrangement with the heads of the departments concerned.

## ANATOMY

### 109. **Special Anatomy for Physicians and Advanced Students.**

Associate Professor MOODY and Assistant Professor HARVEY.

*Hours to be arranged.*

### 210. **Research.**

Associate Professor MOODY, Assistant Professor HARVEY, and Dr. SMITH.

Students and others who are sufficiently prepared will be allowed to undertake research upon original problems under the direction of members of the staff. The course also gives opportunity for those wishing to gain experience in special histological technique and in the construction of papers for publication. If the results obtained merit it, they will be published.

*Hours optional.*

### 211. **Journal Club.**

Associate Professor MOODY.

Reviews of current anatomical literature will be presented by the students and discussed informally.

## PHYSIOLOGY

### 210. **Experimental Biology.**

Dr. WULZEN.

Special problems in cell physiology and the tropisms.

*Hours to be arranged.*

### 211A. **Advanced Physiology.**

Associate Professor MAXWELL.

Some simple piece of research is repeated and extended in connection with a study of the original literature on the subject.

### 211B. **Advanced Chemical Biology.**

Associate Professor ROBERTSON.

Special topics may be selected by the student in conference with the professor as subjects of advanced and intensive study.

### 212. **Research in Physiology.**

Associate Professor MAXWELL.

Hours and subjects to be arranged.

### 213. **Research work in Physiological Chemistry.**

Associate Professor ROBERTSON.

Open to students who have the necessary training. The subject of the research and the time to be devoted to it to be arranged in conference with Professor ROBERTSON.

## PATHOLOGY AND BACTERIOLOGY

201. **Experimental Pathology**

Assistant Professor RUSK and Dr. CHRISTIANSEN.

An elective course to which a limited number (not over six) especially qualified students will be admitted. Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alterations will be undertaken and the results demonstrated to those in Pathology 103, which latter course it is intended to supplement. Special problems may also be undertaken.

202. **Research. Problems of Infection and Immunity.** Professor GAY.*Hours and units to be arranged.*203. **Research. Neuropathology.**

Assistant Professor RUSK.

*Hours and units to be arranged.*204. **Research. Bacteriology and Protozoology.** Professor MEYER.

The investigation of concrete problems suggested by the work in medical bacteriology.

*Hours and units to be arranged.*205. **Advanced Morbid Anatomy and Histopathology.**

Assistant Professor COOKE.

An elective course for fourth year and graduate students in medicine, comprising autopsy technic and the working up of tissues and cultures resulting from post mortem examinations. University Hospital.

*Hours and units to be arranged.*

## MEDICINE

201. **Tropical Medicine.** Under the supervision of Professor MEYER.

A few of the main subjects in tropical medicine and sanitation will be considered. The co-operation of the Medical Department of the U. S. Army and Public Health Service is promised. Considerable material also is available in the wards and Out-Patient Department of the University Hospital.

Quarter course.

**202. Tropical Medicine.**

Professor MEYER.

A laboratory course in connection with Course 201.

*Time to be arranged.*

**203. Studies in Cardiac Pathology.**

Dr. ALLEN.

This course will take up the study of the heart by means of the newer graphic methods. Opportunity will be afforded the student to study the use of the polygraph and the electro-cardiograph. Particular stress will be laid upon the interpretation of records from these instruments.

Half course.

*Time to be arranged.*

**204. Lectures and Clinics on Ductless Glands and Diseases of Old Age.**

Professor MOFFITT.

Special attention will be devoted to the pituitary, adrenal, thymus and parathyroid glands. Certain affections of old age, arterio-sclerosis, disorders of digestion, etc., will be given special emphasis.

Quarter course.

**205. Clinical Medicine (U. C. H.).**

Students will act as clinical clerks in the wards and Out-Patient Department of the University Hospital. This work will be under the supervision of the head of the department and will include such advanced laboratory studies of the patients as are necessary.

Single or double course, limited to 8 students.

**206. Clinical Medicine (S. F. H.).**

Students will act as clinical clerks in the wards of the San Francisco Hospital. This work will be under the supervision of a member of the department and will include such laboratory studies of the patients as are necessary. Time will also be allotted to visit the Tuberculosis Clinic and Hospital, and also the Isolation Hospital.

Single or double course.

**NEUROLOGY**

**201. Neurology.**

Dr. LENNON.

A course in which the newer problems of neurology will be reviewed.  
Quarter course.

**202. Neurology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**DERMATOLOGY****201. Dermatology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**202. Dermatology.**

Professor MORROW and Dr. LEE.

This course consists of preparation and examination of biopsies and bacteriology of the skin. Opportunity is also given for research.

Half course.

*Time to be arranged.*

**PEDIATRICS****201. Pediatrics.**

Professor LUCAS.

An elective course in pediatrics will be open to fourth-year men in the wards and the Out-Patient Department of the University Hospital. This course will consist of individual case teaching in which students will be expected to do all the work in connection with the patients assigned to them. This will include following the case daily, doing all the laboratory work necessary, and looking up literature as far as available. There will be ward talks and demonstrations in the laboratory. Case histories will be taken up to cover conditions which are important and which are not found in the wards during the time the course is in progress. If the time is available special problems will be assigned students electing a double course.

Single or double course.

**SURGERY****201. Surgery.**

Professor TERRY.

The students will act as clinical clerks in the wards and Out-Patient Department of the University Hospital. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited.

Single or double course.

**202. Surgery.**

**Dr. BRUNN.**

The students will act as clinical clerks in the wards of the San Francisco Hospital. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited.

Single or double course.

**203. Surgical Physiology and Pathology.**

**Dr. POPE.**

A research course in thoracic, vascular and abdominal surgery will be offered. The transplantation of tissues and organs, and the surgery of the ductless glands will also form a part of this work. The number of students will be limited.

Half course.

*Time to be arranged.*

**204. Surgery of the Peripheral and Central Nervous System.**

**Dr. NAFFZIGER.**

Lectures, demonstrations and operations. This course will supplement course 109. Opportunity will be afforded for research work in problems of this branch of surgery. The work will be carried on at the University Hospital and the San Francisco Hospital.

Half course.

**205. Surgical Pathology.**

**Dr. PRATT,**

A research course in subjects to be assigned. *Hours to be arranged.*

**206. Operative Surgery.**

**Dr. HOWE.**

An operative course on the cadaver.

Half course.

**ORTHOPEDIC SURGERY**

**201. Orthopedic Surgery.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**202. Orthopedic Surgery.**

**Dr. BALDWIN.**

Conferences and demonstrations of wet and dry specimens, illustrating joint-function, the more common injuries, and deformities of bone and joint.

Quarter course.



## UROLOGY

201. **Urology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

## OPHTHALMOLOGY

201. **Ophthalmology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

## LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY

201. **Laryngology, Otology and Rhinology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

## ROENTGENOLOGY

201. **Roentgenology.**

Dr. DAVENPORT.

Students will be assigned to assist in technical work.

Single or double course.

*Time to be arranged.*

## OBSTETRICS AND GYNECOLOGY

202. **Obstetrics and Gynecology.**

A practical course including work in the Out-Patient Department, the wards, and the operating-room. Students will act as clinical clerks in the wards and as assistants in the operating room. The course is given in part at the San Francisco Hospital.

Double course; forenoons. (One-half day plan only). Limited to two students.

## **SCHEDULES AND LIST OF STUDENTS**



## **SCHEDULES, 1914 - 15**

FIRST YEAR  
First Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-11	Histology SMITH	Anatomy Moody	Histology SMITH	Anatomy Moody	Histology SMITH	Anatomy Moody
11-12						Histology SMITH
1-5	Anatomy Moody	Anatomy Moody	Anatomy Moody	Anatomy Moody	Anatomy Moody	

**FIRST YEAR**  
*Second Semester*

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9					Neurology Lecture HARVEY	
9-10	Physiology Laboratory	Physiology Laboratory	Physiology Laboratory	Physiology Laboratory	Biochemistry Lecture ROBERTSON	Physiology Laboratory
10-11					Physiology Lectures MAXWELL BURNETT	
11-12	Physiology Lectures MAXWELL BURNETT	Physiology Lectures MAXWELL BURNETT	Physiology Lectures MAXWELL BURNETT	Physiology Lectures MAXWELL BURNETT		Physiology Lectures MAXWELL BURNETT
1-2	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON	Neurology Laboratory HARVEY	
2-5	Biochemistry Laboratory	Biochemistry Laboratory	Biochemistry Laboratory	Biochemistry Laboratory		

SECOND YEAR  
First Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Morbid Anatomy & Histopathology RUSK	Topographical Anatomy Section 1. MOODY HARVEY	Morbid Anatomy & Histopathology RUSK	Morbid Anatomy & Histopathology RUSK	Topographical Anatomy Section 1. MOODY HARVEY	Morbid Anatomy & Histopathology RUSK
9-10		Topographical Anatomy Section 2. MOODY HARVEY				
10-11		Supernatural Pathology (Elective)				
11-12	Immunology Lecture GAY		Immunology Lecture GAY			
1-4	Bacteriology & Immunology GAY MEYER	Bacteriology & Immunology GAY MEYER	Bacteriology & Immunology GAY MEYER	Topographical Anatomy Section 2. MOODY HARVEY	Bacteriology & Immunology GAY MEYER	
4-5						

SECOND YEAR  
Second Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9						
9-10	Elementary Neurology LENNOR	Ophthalmoscopy BLANE	Dermatology MORROW	Surgical Technic POPE	Pharmacology in Berkeley	
10-11	Section Work Medicine & Surgery	Section Work Medicine & Surgery	Section Work Medicine & Surgery	Section Work Medicine & Surgery		Hygiene & Preventive Medicine
11-12						
12-1	Elementary Surgery TERRY	Pediatrics LUCAS	Medical lectures & Demonstrations MOFFITT	Medical lectures & Demonstrations MOFFITT		Materia Medica SCHNEIDER
2-3	Clinical Physiology MILGORE	Clinical Pathology BRIGGS FOSTER	Clinical Physiology MILGORE	Clinical Pathology BRIGGS FOSTER	Pharmacology in Berkeley	Sections Medicine 80 hrs Surgery 48 - Total 128 -
3-4	Surgical Pathology PRATT		Surgical Pathology PRATT			
4-5	Materia Medica, etc SCHNEIDER		Materia Medica, etc SCHNEIDER			



THIRD YEAR  
First Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	BATURDAY
8-9			Surgery Lectures Demonstrations TERRY			Surgery Lectures Demonstrations TERRY
9-10	Ophthalmology ALEXANDER	Neurology Clinical Lectures LENNON	Dermatology MORROW	Neurology Clinical Lectures LENNON	Surgery  Out Patient Day THOMPSON	Ophthalmology Clinical Lectures FRANKLIN
10-11	Surgery Recitations POPE NAFFZIGER	Medicine Section Work	Ophthalmology Section Work	Medicine Section Work		Hygiene & Preventive Medicine
11-12	Pediatrics LUCAS		Pediatrics LUCAS		Pediatrics LUCAS	Obstetrics Recitations
12-1	Clinical Medicine MORRITT	Obstetrics Recitations	Therapeutics KILGORE	Dietetics BINE	Clinical Medicine MORRITT	
2-3	Gynecological Pathology MORSE	Clinical Pathology BRIGGS FOSTER	Obstetrics Recitations	Clinical Pathology BRIGGS FOSTER	Obstetrics Conferences SLEMONS	
3-4			Surgical Pathology PRATT			
4-5	Neurological Surgery NAFFZIGER				Forensic Medicine	

THIRD YEAR  
Second Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9		Medicine Lectures Demonstrations at B.F. Hospital KERR	Surgery Lectures Demonstrations Recitations TERRY	Medicine Lectures Demonstrations at B.F. Hospital KERR		Surgery Lectures Demonstrations Recitations TERRY
9-10	Therapeutics KILGORE	Neurology Clinical Lectures at B.F. Hospital LENNON	Dermatology MORROW	Neurology Clinical Lectures at B.F. Hospital LENNON	Syphilis SCHMITT	Ophthalmology Clinical Lectures FRANKLIN
10-11	Ear, Nose, Throat Section Work	Surgery Clinical Demonstrations at B.F. Hospital BRUNN	Ear, Nose, Throat Section Work	Medicine Clinical Demonstrations at B.F. Hospital EBRIGHT	Ear, Nose, Throat Clinical Lectures HOUSTON	Hygiene & Preventive Medicine
11-12	Surgery Recitations POPE NAPFZIGER	Section Work	Pediatrics LUCAS	Section Work	Surgical Physiology POPE	Psychiatry RICHARDS PODSTAT
12-1	Clinical Medicine MOPPITT	Medicine & Surgery at B.F. Hospital		Medicine & Surgery at B.F. Hospital	Clinical Medicine MOPPITT	Materia Medica etc SCHNEIDER
2-3	Pediatrics LUCAS	Therapeutics KILGORE	Obstetrics Recitations	Surgical Pathology PRATT	Obstetrics Conferences SHEMONS	
3-4		Gynecology Recitations SHEMONS	Gynecology Recitations SHEMONS			
4-5	Materia Medica, etc SCHNEIDER		Materia Medica, etc SCHNEIDER	Obstetrics Recitations	Forensic Medicine Jan to Feb	

FOURTH YEAR  
First Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Neurology Clinical Lectures LENNON	Medicine Lectures Demonstrations at S.F. Hospital HERR	Surgery Lectures Demonstrations TERRY	Medicine Lectures Demonstrations at S.F. Hospital HERR	Neurology Clinical Lectures LENNON	Surgery Lectures Demonstrations TERRY
9-10	Gynecology Clinical Lectures MOORE	Surgery Clinical Demonstrations at S.F. Hospital BRUNN	Urology Clinical Lectures WILLARD	Medicine Clinical Demonstrations at S.F. Hospital EBRIGHT	Dermatology MOORE	Gynecology Clinical Lectures MOORE
10-1	Section Work <sup>*</sup>	Section Work at S.F. Hospital	Section Work <sup>*</sup>	Section Work at S.F. Hospital	Section Work <sup>*</sup>	Section Work <sup>*</sup>
2-3	Gynecology Ward Work SLEMONS	Therapeutics HILGORE	Orthopedic Surgery Lectures Demonstrations BALDWIN	Ward Work <sup>†</sup>	Therapeutics HILGORE	* See Section Schedule † See Ward Work Schedule
3-4		Ward Work <sup>†</sup>	Ward Work <sup>†</sup>		Ward Work <sup>†</sup>	
4-5						

FOURTH YEAR  
Second Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-11	Electives	Electives	Electives	Electives	Electives	Electives
11-12						Psychiatry (Required) RICHARDS POBSTAT
12-1						
2-4	Electives	Electives	Electives	Electives	Electives	
4-5					Forensic Medicine (Required)	

## DEGREES GRANTED MAY, 1914

Roy Charles Abbott	Ontario	Henry Ehlers, B.S.	San Francisco
211 Carl st., San Francisco.		203 Oak st., San Francisco.	
Frank Stanley Baxter, B.S.	Oakland	Bess Lewis, B.S.	Los Gatos
1288 Second ave., San Francisco.		1539 Ninth ave., San Francisco.	
Hugh Kling Berkley	Santa Monica	Edna Locke, B.S., M.S.	Eureka
1031 Stanyan st., San Francisco.		1278 Fourth ave., San Francisco.	
Edward Cline Bull, B.S.	Marysville	George Warren Pierce	Pomona
1031 Stanyan st., San Francisco.		University Hospital, San Francisco.	
Ruby Lacy Cunningham, B.S., M.S.		Albert Holmes Rowe, B.S., M.S.	Oakland
	San Bernardino	163 Carl st., San Francisco.	
2739 Parker st., Berkeley.			

## STUDENTS, SESSION 1913-14

## FOURTH-YEAR STUDENTS

Roy Charles Abbott	Ontario	Henry Ehlers, B.S.	San Francisco
211 Carl st., San Francisco.		203 Oak st., San Francisco.	
Frank Stanley Baxter, B.S.	Oakland	Bess Lewis, B.S.	Los Gatos
1288 Second ave., San Francisco.		1539 Ninth ave., San Francisco.	
Hugh Kling Berkley	Santa Monica	Edna Locke, B.S., M.S.	Eureka
1031 Stanyan st., San Francisco.		1278 Fourth ave., San Francisco.	
Edward Cline Bull, B.S.	Marysville	George Warren Pierce	Pomona
1031 Stanyan st., San Francisco.		University Hospital, San Francisco.	
† Esther Clarice Cumberland, B.S.		Albert Holmes Rowe, B.S., M.S.	Oakland
	Los Angeles	163 Carl st., San Francisco.	
1278 Fourth ave., San Francisco.		Fred Nicholas Scatena, B.S. San Francisco	
Ruby Lacy Cunningham, B.S., M.S.		888 Union st., San Francisco.	
	San Bernardino		
2739 Parker st., Berkeley.			

## THIRD-YEAR CLASS

Irvin H. Betts	Salinas	† William Robert Hume	Oakland
211 Carl st., San Francisco.		4320 Piedmont ave., Oakland.	
John Talmadge Boyer	San Francisco	George Arneke Kretzinger, B.S.	Hayward
120 Hoffman ave., San Francisco.		1281 Second ave., San Francisco.	
† Elton Ralph Charvos	Santa Maria	Fred Herman Kruse	Tulare
1281 Second ave., San Francisco.		163 Carl st., San Francisco.	
Gordon Adams Clapp	Forest Grove, Ore.	Alice Freeland Maxwell, B.S.	San Francisco
800 Page st., San Francisco.		1241 Third ave., San Francisco.	
Abelson Epstein	San Francisco	John Morse Rehfsch	San Francisco
712 Hayes st., San Francisco.		1940 Scott st., San Francisco.	
Aaron Friedman	San Francisco	† Agnes Julia Scholl, A.B.	Los Angeles
3468 Seventeenth st., San Francisco.		1241 Third ave., San Francisco.	
Justin Keyser Fuller, B.S.	San Francisco	Homer Carlton Seaver, A.B.	Pomona
779 First ave., San Francisco.		211 Carl st., San Francisco.	
Clain Fanning Gelston	Hamilton	Clarence Edgar Wells, B.S.	Visalia
12 Woodland ave., San Francisco.		1252 First ave., San Francisco.	
Lynn Newton Hart	Santa Rosa	John Homer Woolsey, B.S. Rochester, N. J.	
1031 Stanyan st., San Francisco.		163 Carl st., San Francisco.	
Henry Leopold Holzberg, B.S., M.S.			
	San Francisco		
1631 Geary st., San Francisco.			

† First semester only.

## SECOND-YEAR CLASS

Charles Albert Ainslie, B.S.	Los Angeles	Charlotte Smith Linden, B.S.	San Francisco
2522 Bancroft way, Berkeley.		2520 Virginia st., Berkeley.	
Mabel Florence Arrington, B.S.	East Northfield, Mass.	Charles Pierre Louis Mathe	San Francisco
21 Hillside Court, Berkeley.		3867 Twenty-sixth st., San Francisco.	
Elizabeth Worley Bailie, B.S.	Berkeley	Laird Monterey Morris	Berkeley
2455 Ashby ave., Berkeley.		2229 Vine st., Berkeley.	
Eugene Howard Barbera	Oakland	Myri Morris, B.S.	Berkeley
1179 Eighth st., Oakland.		2229 Vine st., Berkeley.	
William Archdall Boyle, B.S.	San Rafael	Edward Francis Mullaly	Vallejo
2611 Durant ave., Berkeley.		2383 College ave., Berkeley.	
Rowland Sill Briggs, B.S.	Sacramento	Robert Reid Newell	Stockton
2218 Dana st., Berkeley.		2435 Oregon st., Berkeley.	
Leonard W. Buck, B.S.	Vacaville	Joseph Allen Owen, B.S.	Red Bluff
2119 Channing way, Berkeley.		2220 Union st., Berkeley.	
Eben James Carey	Los Angeles	Frank William Pinger	Berkeley
2827 Bancroft way, Berkeley.		2550 Buena Vista way, Berkeley.	
William E. Chamberlain, B.S.	Oakland	Rose Marguerite Rosenthal, B.S.	Berkeley
2338 Channing way, Berkeley.		2307 Hearst ave., Berkeley.	
Georgine Elizabeth Christiansen	Bohn, Denmark	John Carroll Ruddock, B.S.	Ukiah
1610 LeRoy ave., Berkeley.		2646 Dwight way, Berkeley.	
Enos Paul Cook, B.S.	Oakland	Edward Salomon, B.S.	San Francisco
190 Forty-first st., Oakland.		1634 Fell st., San Francisco.	
Mary Craig, B.S.	Upland	Margaret Schulze, B.S.	Berkeley
2624 Virginia st., Berkeley.		1731 Carlton st., Berkeley.	
Brython Parry Davis, B.S.	Weaverville	Henry Hunt Searls, B.S.	Nevada City
2646 Dwight way, Berkeley.		2317 Durant ave., Berkeley.	
Thomas Balfour Dunn, B.S.	Santa Cruz	Robert G. Sharp, B.S., M.S., Ph.D.	Otay
2522 Ridge rd., Berkeley.		2711 Parker st., Berkeley.	
Harold A. Fletcher, B.S.	Reno, Nev.	Julius Sherman	San Francisco
1 Canyon rd., Berkeley.		2311 Bowditch st., Berkeley.	
Kendal Phelps Frost, B.L.	Los Angeles	Robert Stanton Sherman, B.S.	Berkeley
2617 Durant ave., Berkeley.		2327 Bancroft way, Berkeley.	
Orville R. Goss, B.S.	Berkeley	Walter Charles Smallwood, B.S.	Richmond
2119 Channing way, Berkeley.		1547 Euclid ave., Berkeley.	
Harold Pittman Hare, B.S.	Fresno	Caroline Hallowell Smedley, A.B.	Hollywood
2510 LeConte ave., Berkeley.		2723 Durant ave., Berkeley.	
George Stevenson Holeman, A.B.	Riverside	William Ben. Thompson, A.B.	South Pasadena
1932 Home st., Berkeley.		2521 Durant ave., Berkeley.	
Charles Daniel Holliger, B.S.	Indianapolis	Benjamin Harrison Viau, B.S.	Sanger
2520 Bancroft way, Berkeley.		2049 Center st., Berkeley.	
Warren Douglas Horner, B.S.	Chico	Myer Jacob Wahraftig	Orangeville
2220 Union st., Berkeley.		1639 Oxford st., Berkeley.	
Felix Henry Hurni, B.S.	Colusa	Marshall Gould Williamson, B.S.	San Francisco
2522 Bancroft way, Berkeley.		2522 Ridge rd., Berkeley.	
Maurice Jones, B.S.	Ione		
2218 Dana st., Berkeley.			
Frederick George Linde, B.S.	Auburn		
2646 Dwight way, Berkeley.			

## FIRST-YEAR CLASS

Thomas Fred Ayers	San Francisco	Merrill Windsor Hollingsworth	Los Angeles
1006 Page st.,	San Francisco.	2327 Bancroft way,	Berkeley.
Luther Musson Boyers, A.B.	Palo Alto	Zang Yien Kwauk	Shanghai
2540B Milvia st.,	Berkeley.	2218 Bancroft way,	Berkeley.
Frank Philip Brendel	Sacramento	Kay Gustav Lorentzen, A.B.	Beloit, Wis.
2634 Bancroft way,	Berkeley.	2484 Forty-seventh ave.,	San Francisco.
Lorrin Linwood Caldwell	San Francisco	Douglas Roy McColl	Berkeley
2522 Bancroft way,	Berkeley.	2608 Benvenue ave.,	Berkeley.
Pini Joseph Calvi	San Jose	Horace Hoagland McCoy, B.S.	Beaumont
2327 Bancroft way,	Berkeley.	2630 Durant ave.,	Berkeley.
Earle J. Clark	Seattle	Jay McLean	San Francisco
1415 Grove st.,	Berkeley.	2430 Bancroft way,	Berkeley.
Nicholas John Clecak	Oakland	Emma Mehlmann, B.L.	San Luis Obispo
3778 Telegraph ave.,	Oakland.	1801 Euclid ave.,	Berkeley.
Allan Largess Cohn	San Francisco	Hiram Edgar Miller	Elk Grove
2218 Dana st.,	Berkeley.	2305 Bancroft way,	Berkeley.
Mendel Leopold Cohn	Placerville	Ottile Miller	San Francisco
2429 Dana st.,	Berkeley.	732 Treat ave.,	San Francisco.
Orrin Cook	Lodi	Vinton Adolf Muller	Nevada City
1547 Euclid ave.,	Berkeley.	2416 Durant ave.,	Berkeley.
Dunnleigh Corey, B.S.	La Jolla	Alma Stevens Pennington	San Francisco
2646 Dwight way,	Berkeley.	2520 Virginia st.,	Berkeley.
Charles Alfred Craig	Oakland	Parker Allen Reische	Meridian
2432 Ellaworth st.,	Berkeley.	2600 Durant ave.,	Berkeley.
John Atkinson Duncan	Yuba City	Ethel Righetti	San Francisco
2333 Channing way,	Berkeley.	805 Walnut st.,	San Francisco.
Jewel Fay, B.L.	Porterville	Gladys Ayer Roas	Sebastopol
2533 Chilton way,	Berkeley.	2203 Atherton st.,	Berkeley.
Howard Webster Fleming	San Jose	Elizabeth Schulze	Berkeley
2510 LeConte ave.,	Berkeley.	1731 Carlton st.,	Berkeley.
Frances Pearl Frank	Los Angeles	Lewis Seligman	Dinuba
2627 Hearst ave.,	Berkeley.	2407 Bowditch st.,	Berkeley.
William Christensen Frey	Modesto	Alson Anderson Shufelt	Reno, Nev.
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2218 Dana st.,	Berkeley.	2327 Bancroft way,	Berkeley.





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**UNIVERSITY OF CALIFORNIA**

**MEDICAL SCHOOL**

**ANNOUNCEMENT FOR 1915-16**

**UNIVERSITY OF CALIFORNIA PRESS**

**BERKELEY**

**1915**



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## CALENDAR

1915

July 1.—Undergraduate applications for admission to the Medical School, with credentials, should be filed at the Dean's office. This may be done by mail.

August 5-10.—Entrance examinations at Berkeley for freshman standing (pre-medical) in the College of Letters and Science. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before August 4. But applications for permits to be sent by mail should be made as far in advance of August 4 as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall, Berkeley.

August 9.—Academic year begins.

August 9.—Examinations begin for applicants for advanced standing and for students previously conditioned.

August 12, 13, 14 9 A.M.-12M.—Registration of students of all classes in Secretary's office in the main building of the Medical School in San Francisco.

August 16.—Class work begins. Payment of the first installment of the tuition fee is required on or before this date.

November 25-27.—Thanksgiving Recess.

December 6.—Examinations begin.

December 13.—Christmas vacation begins.

1916

January 3.—Second half-year begins. Payment of the second installment of the tuition fee is required on or before this date.

March 23.—Charter Day: a holiday.

April 24.—Examinations begin.

May 17.—Commencement Day.



## **ORGANIZATION**





## REGENTS OF THE UNIVERSITY

**NOTE.**—The regular meetings of the Regents are held at 2 p.m. on the second Tuesday of each month, except July, and on the day before Commencement, at such places as may from time to time be determined, ordinarily at the San Francisco Institute of Art, California and Mason streets, San Francisco.

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*Medical School*

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H. C. NAFFZIGER, M.D.	Assistant Surgeon
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A. W. LEE, M.D. ....	In charge of Medical Art
E. H. FALCONE, M.D. ....	Resident Physician
THEONTON STEARNS, M.D. ....	Resident Surgeon
L. A. EMGE, M.D. ....	Resident Gynecologist
E. M. WATERS, M.D. ....	Resident Pediatrician
LINTON GEDDINE, M.D. ....	Assistant Resident Pediatrician
I. H. BETTS, M.D. ....	Intern
C. F. GELSTON, M.D. ....	Intern
F. H. KRUSE, M.D. ....	Intern
ALICE F. MAXWELL M.D. ....	Intern
H. C. SEAYER, M.D. ....	Intern
C. E. WELLS, M.D. ....	Intern
J. H. WOOLSEY, M.D. ....	Intern

#### OUT-PATIENT DEPARTMENT

H. C. MOFFITT, M.D., Physician-in-Chief.  
 W. I. TERRY, M.D., Surgeon-in-Chief.  
 WILLIAM PALMER LUCAS, M.D., Pediatrician-in-Chief and Director of the  
 Out-Patient Department.  
 F. W. LYNCH, M.D., Obstetrician and Gynecologist-in-Chief.

#### GENERAL MEDICINE

L. H. BRIGGS, M.D. Chief of Clinic.  
 ELDRIDGE J. BEST, M.D.  
 LOVELL LANGSTROTH, M.D.  
 HANS LISSE, M.D.

#### NEUROLOGY

M. B. LENNON, M.D., Chief of Clinic.  
 R. W. HARVEY, M.D.  
 C. L. TRANTER, M.D.

#### PSYCHIATRY

EVA C. REID, M.D., Chief of Clinic.

#### DERMATOLOGY

H. MORROW, M.D., Chief of Clinic.  
 L. S. SCHMITT, M.D.  
 A. W. LEE, M.D.  
 F. H. ZUMWALT, M.D.

*Medical School*

## PEDIATRICS

R. L. ASH, M.D., Chief of Clinic.  
 E. M. WATTERS, M.D.  
 V. B. APPLETON, M.D.  
 ELLEN S. STADTMULLER, M.D.  
 OLGA BRIDGMAN, M.D. Psychologist.  
 LOUISE MORROW, M.D., Social Service Worker.

## GENERAL SURGERY

S. T. POPE, M.D., Chief of Clinic.  
 H. C. NAFFZIGER, M.D.  
 HERBERT S. THOMSON, M.D.  
 J. P. PRATT, M.D.

## OPHTHALMOLOGY

W. F. BLAKE, M.D., Chief of Clinic.  
 E. W. ALEXANDER, M.D.  
 EDWARD A. GLASER, M.D.  
 R. H. PARKINSON, M.D.

## OTOLOGY, LARYNGOLOGY AND RHINOLOGY

A. J. HOUSTON, M.D., Chief of Clinic.  
 F. C. LEWITT, M.D.  
 A. B. JOHNSON, M.D.  
 H. B. CHRISTIANSEN, M.D.  
 J. B. THOMAS, M.D.

## UROLOGY

W. P. WILLARD, M.D., Chief of Clinic.  
 F. HINMAN, M.D.  
 J. B. LEONARD, M.D.

## ORTHOPEDIC SURGERY

WALTER I. BALDWIN, M.D., Chief of Clinic.  
 C. C. CRANE, M.D.  
 HOWARD MARKEL, M.D.  
 Miss M. L. MEL, B.L., Social Service Worker.

## WOMAN'S CLINIC

W. G. MOORE, M.D. }  
 J. C. NEEL, M.D. } Chiefs of Clinics.  
 L. A. EMGE, M.D.  
 ———, M.D.

MAUD E. MORRISON, R.N., Social Service Worker.

TUBERCULOSIS CLINIC

G. H. EVANS, M.D., Chief of Clinic.  
 L. S. MACE, M.D.  
 ESTHER ROSENCRANTZ, M.D.  
 L. S. SCHMITT, M.D., Serologist.  
 H. E. RUGGLES, M.D., Roentgenologist.  
 Miss HELEN BRUCKMAN, Technician.  
 Miss ELOISE NORWOOD SCOVILLE, R.N., Head Nurse in charge of Patient Department.  
 Mrs. EMILY REED, in charge of Records.  
 Miss HAZEL WILLIAMS, Assistant in charge of Records.

SAN FRANCISCO HOSPITAL MEDICAL STAFF

W. W. KERR, M.D. ....	Physician-in-Chief
HAROLD BRUNN, M.D. ....	Surgeon-in-Chief
W. P. LUCAS, M.D. ....	Pediatrician-in-Chief
HOWARD MORROW, M.D. ....	Dermatologist
J. V. COOKE, M.D. ....	Pathologist
G. H. EVANS, M.D. ....	Visiting Physician
W. S. FRANKLIN, M.D. ....	Ophthalmologist
W. G. MOORE, M.D. ....	Gynecologist
M. B. LENNON, M.D. ....	Neurologist
L. S. SCHMITT, M.D. ....	Serologist
L. I. BREITSTEIN, M.D. ....	Obstetrician
W. P. WILLARD, M.D. ....	Urologist
F. C. LEWITT, M.D. ....	Laryngologist
G. E. EBRIGHT, M.D. ....	Assistant Visiting Physician
J. B. FRANKENHEIMER, M.D. ....	Assistant Visiting Physician
L. S. MACE, M.D. ....	Assistant Visiting Physician
L. P. HOWE, M.D. ....	Assistant Visiting Surgeon
H. C. NAFFZIGER, M.D. ....	Assistant Visiting Surgeon
F. S. BAXTER, M.D. ....	Resident Assistant Surgeon
EDWARD TOPHAM, M.D. ....	Assistant Obstetrician
F. H. ZUMWALT, M.D. ....	Assistant Dermatologist
I. C. BRILL, M.D. ....	Assistant in Charge Clinical Laboratory
J. H. CATTON, M.D. ....	Assistant Visiting Physician
ESTHER ROSENCRANTZ, M.D. ....	Assistant Visiting Physician
G. A. CLAPP, M.D. ....	Intern
A. EPSTEIN, M.D. ....	Intern
A. FRIEDMAN, M.D. ....	Intern
H. L. HOLZBERG, M.D. ....	Intern
G. A. KRETSINGER, M.D. ....	Intern

## HISTORY AND DEVELOPMENT OF THE SCHOOL

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In 1862, Dr. H. H. Toland erected a building to serve as the nucleus of a medical school. This was subsequently known as Toland Hall and in 1872 was formally transferred to the Regents of the University of California as a department of the University. For many years the affiliation was merely nominal and the medical faculty was in entire control of the policy of the school, the support of the institution being derived from fees of the students.

In 1895, the course of instruction was extended from three to four years. In 1898, the school was moved to its present location on Parnassus Heights, a tract of land of thirteen and one-half acres donated to the University by the late Adolph Sutro. Funds were provided by the Legislature to erect buildings for law, medicine, dentistry and pharmacy, and at a later date the law building was transferred by the Board of Regents to the Medical School.

In 1902, the Board of Regents adopted a resolution of vital importance to the Medical School. Instead of preserving the former loose affiliation it was determined to regard the medical department as an integral part of the University. The properties of the school were transferred to the University, the students' fees were turned into the general University fund and support of the school was assumed by the Regents. The first two years of medicine were at once put upon an academic basis and suitable laboratories equipped.

With the destruction of the Out-Patient Department by the earthquake and fire of 1906, it became necessary to transfer the work of the first two years to Berkeley and to transform the main building of the school into a hospital and out-patient clinic. In December, 1911, the Regents of the University announced their intention of bringing together the various departments of the school, of providing a proper modern teaching hospital and of placing the clinical years upon an academic basis. Therefore, on April 9, 1912, it was resolved to consolidate all departments of the school in San Francisco as soon as feasible. A recommendation of the President of the University was adopted which provided a plan of reorganization for the clinical years.

Clinical instruction is now divided into four main departments, Medicine, Surgery, Diseases of Women and Pediatrics. The departments of Obstetrics and Gynecology and Pediatrics are in charge of full time teachers, and as soon as possible the departments of Medicine and Surgery will be placed on the same basis.

In 1914 a Department of Tuberculosis and a Department of Psychiatry were established and work in these departments included in the curriculum.

In 1915 arrangements were perfected by which affiliation with the Hospital for Children and Training School for Nurses was brought about and in the same year the Regents of the University agreed to take over the Hahnemann Medical College of the Pacific and to include electives in Homeopathy in the curriculum of the Medical School.

#### THE GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH

In memory of her husband, George Williams Hooper, a pioneer citizen of San Francisco, Mrs. Hooper, on Commencement Day, May 14, 1913, transferred to the Regents of the University certain valuable property to serve as a foundation for an institute of medical research. The income at present provided is \$50,000 a year, but at the end of four years \$100,000 per annum will be available.

The formal opening of the Foundation was celebrated on March 7, 1914. Addresses were delivered by Dr. Henry S. Pritchett, President of the Carnegie Foundation for the Advancement of Teaching, Dr. Richard M. Pearce, Professor of Research Medicine, University of Pennsylvania, and Honorable Curtis H. Lindley. The policy and work of the Foundation is determined by an advisory board of seven members conferring with the Regents of the University.

The building formerly occupied by the Veterinary School has been devoted by the Regents of the University to the work of the Foundation. Dr. George H. Whipple, formerly Associate Professor of Pathology in Johns Hopkins University, is Director, and is also Professor of Research Medicine in the Medical School. The work of the Hooper Foundation therefore, will be closely correlated with that of the Medical School. Men at work in The Research Laboratory will have free access to the University Hospital wards and positions in the Hooper Foundation will be available for men in the Medical School who desire to enter a career in Research Medicine. The work of the Hooper Foundation in no way replaces any of the research in each department of the Medical School





**REQUIREMENTS FOR ADMISSION  
AND GRADUATION**



## REQUIREMENTS FOR ADMISSION\*

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A preliminary collegiate preparation is required for the course in medicine, and men and women are admitted on the same terms. As candidates for the degree of Doctor of Medicine the School receives the following:

1. Graduates of approved colleges or scientific schools who present evidence of a satisfactory training in Chemistry, Physics and Biology and a reading knowledge of German or French. The courses in chemistry must include Inorganic and Organic Chemistry.

2. Students in the College of Letters and Science of this University who have attained senior standing, may, at the beginning of their fourth or senior year in the University, register as students in the Medical School, and upon completion of the first year in the Medical School, may receive the Bachelor's degree in the College of Letters and Science. Such students must also furnish evidence that they have had a satisfactory training in Chemistry, Physics, and Biology and that they possess a reading knowledge of German or French.

3. Students who have satisfactorily completed at least two full years of collegiate work and who have received the Junior Certificate of this University, or its equivalent.

The studies pursued during the two years which lead to the Junior Certificate include English, American History and Civics, Mathematics, Chemistry, Physics, Biology (Zoology), and German or French. Applicants for admission to the Medical School who have pursued their pre-medical studies in some other University must submit credentials from the institution in which they have studied. This statement should include the number of hours devoted to class- and laboratory-work and also the grade received in each subject. For the guidance of those who wish to arrange their preliminary training the following courses given in this University present the minimum of satisfactory preparation in the sciences named: (numbers refer to the Announcement of Courses for 1915-16); Physics 2A-2B, and 3B or 4B; Chemistry 1A-1B, 8B, 9; Zoology 1A, 5. These courses are described below:

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\* All inquiries should be addressed to the Dean of The University of California Medical School.

**PHYSICS****2A-2B; 4A-4B. General Physics.**

Professor LEWIS and Associate Professor RAYMOND.

Lectures with experimental illustration, recitations, and problems. Mechanics, properties of matter, heat, sound, light, energy transformation, electricity, and magnetism.

**2A-2B. Lectures.**

Professor LEWIS.

Mechanics, properties of matter, heat, sound, light, energy transformation, electricity, and magnetism.

3 hrs., throughout the year; 2 units each half-year. Tu Th S, 11.

Prerequisite: matriculation subject 11.

**4A-4B. Recitations and Problems.**

Professor LEWIS and Associate Professor RAYMOND.

2 hrs., throughout the year; 2 units each half-year. W F, 9. Prerequisite: matriculation subject 11. Some knowledge of elementary plane trigonometry is desirable.

The prerequisite to courses 2A-2B and 4A-4B may be waived in special cases of distinct merit.

**3A-3B. Physical Measurement.**

Associate Professor MINOR.

Experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. Methods are selected so as to show instructive relations of physical principles, and their adaptation to practical problems. Laboratory exercises twice a week. These courses are usually taken in conjunction with 2A-2B, 4A-4B. Prerequisite: matriculation subject 11.

6 hrs., throughout the year; 2 units each half-year. Tu Th, 1-4

**CHEMISTRY****1A-1B. General Inorganic Chemistry and Qualitative Analysis.**

3 hrs., lectures and quiz, and 4 hrs. laboratory work, throughout the year; 5 units each half-year.

Lectures and quiz.

Assistant Professor HILDEBRAND; Professor LEWIS, Assistant Professors BOOTH, BRAY and TOLMAN, Drs. ROSENSTEIN, GIBSON, ADAMS, ARGO and BRANCH.

Two sections: M W F, 9; M W F, 10.

**Laboratory.**

Assistant Professors BOOTH and BRAY, Professor LEWIS, Assistant Professor HILDEBRAND, Drs. ROSENSTEIN, GIBSON, ADAMS, ARGO, and BRANCH.

Four sections: I, M F, 1-3; II, Tu Th, 9-11; III, Tu Th, 1-3; IV, W, 1-3, S 9-11. Prerequisite: matriculation chemistry subject 12b. In special cases students who have credit for matriculation physics may be allowed to take this course without the chemistry prerequisite, but in no case without the written consent of the instructor.

**8A-8B. Elements of Organic Chemistry.** Assistant Professor BIDDLE.

An introductory study of the compounds of carbon. Recitations and lectures with experimental illustrations. Laboratory course 9 should, if possible, accompany this course.

2 hrs., throughout the year. Lectures, Tu Th, 8.

Fortnightly quiz, hour to be arranged, probably M or Tu, 4.

**9. Elements of Organic Chemistry: Laboratory.**

Assistant Professor BIDDLE.

A comparative experimental study of the physical properties and chemical reactions of the more commonly occurring classes of organic substances. Supplementary to course 8A-8B and open to all students pursuing that course.

6 to 9 hrs, either half-year, 2 to 3 units. M W, M F, or M W F, 1-4.

**ZOOLOGY****1A. General Zoology.**

Associate Professor HOLMES, Mr. BARROWS and Assistants.

An introduction to the facts and principles of animal biology, with special reference to the structure, functions, and evolution of animal life.

Lectures 2 hrs., demonstrations, 4 hrs., first half-year; 4 units. Lectures Tu Th, 10. Demonstrations, four sections: I, M F, 2-4; II, Tu Th, 8-10; III, Tu Th, 2-4; IV, W, 2-4, S, 8-10.

The laboratory exercises are essentially illustrative of lectures and are based on the examination of living and prepared specimens, supplemented by models and charts.

**5. Elementary Embryology.**

Dr. LONG and Mr. PRATT.

8 hrs., second half-year; 4 units. Lecture Tu Th, 8; laboratory Tu Th 8, 10-12. Prerequisite: course 1A.

In preparation for these studies it may be mentioned that high school physics and chemistry are necessary in order to enroll in the beginning university courses in the same subjects. Whereas these requirements as specified will be accepted for admission in the medical school, it should be pointed out that it is highly desirable that the student should not content himself with the acquisition of a Junior Certificate, but should take at least three years of college work, if possible. By this means, not only is more time offered for work in subjects of general culture outside the scientific requirements, but by a combined eight year course (three years as an undergraduate in the university and five years in the medical school) the two degrees of A.B. and M.D. may be obtained.

Students taking the combined course should elect work of some of the following departments: English, Philosophy, Economics, History, Political Science, Education, and Anthropology.

The Faculty of the Medical School is authorized to refuse admission to students who have a low academic record.

#### ADMISSION TO ADVANCED STANDING

Applicants for admission to advanced standing may become candidates for the degree of M.D. under the following conditions: (1) They must furnish evidence that they were eligible for admission to the first year of this school. (2) They must show that courses equivalent in kind and amount to those given in this school in the year or years preceding that to which admission is desired, have been satisfactorily completed in an acceptable Medical School.\* Students taking work at a college, with a lower classification will not be granted credit. (3) At the discretion of the Dean they must be prepared to pass examinations in those subjects for which they ask credit.

#### INSTRUCTION FOR GRADUATES IN MEDICINE

Graduates in medicine may arrange with the heads of the different departments for special work. Graduate students may enter at any time during the year and must register at the Dean's office before beginning work.

Lectures and clinics of interest to practitioners are held on Saturday mornings; for attendance upon these registration is not necessary.

Except under extraordinary circumstances and at the discretion of the Advisory Board of the Medical Faculty, persons who have already received the degree of doctor of medicine will not be admitted as candidates for that degree from this University.

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\* By an acceptable Medical School is meant one classified as "A" by the American Medical Association, and whose entrance requirements are equivalent to those of this School.

### CLASS STANDING AND EXAMINATION

For the determination of class standing and for advancement and graduation the results and markings of all studies and examinations conform to the procedures followed in the Academic Department of the University. The numerals 1, 2, 3 indicate that the student has passed in the first, second and third grade; 4 indicates condition; 5 failure.

In addition students may be certified in each department of study as "Passed with Honor." "Passed" or "Failed."

The judgment of an instructor upon the work of a student may be determined by (a) personal contact and observation of routine work (b) by oral, written or practical examination (c) by a combination of these methods.

Each department makes such rules as it deems necessary concerning the marking of students but all reports are referred to the Committees on First and Second Years or Third and Fourth Years who thereupon transmit their recommendations to the Advisory Board of the Medical School.

Students who have an unabsolved failure at the end of the fourth year will not be recommended as entitled to the degree of Doctor of Medicine or permitted to enter their intern year until the failure is absolved in such manner as may be directed by the Advisory Board of the Medical School.

The Faculty reserves the right to sever the connection of any student with the Medical School at any time for what it deems either mental, physical or moral unfitness for a career in Medicine.

### REQUIREMENTS FOR GRADUATION

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years and must be of good moral character. He must have studied Medicine four full years, and must have attended four annual courses as a matriculated student, the last of which has been spent in this School. He must have completed the required work, have fulfilled satisfactorily all special requirements, and have received a satisfactory grade throughout the entire medical course. He must have discharged all indebtedness to the School.

### INTERN YEAR

Students entering the School in 1914 and thereafter will be required to supplement the academic course in Medicine with a year as intern in an approved hospital or laboratory or as a special worker in a department of the Medical School.



## COURSE IN PUBLIC HEALTH

On the completion of the first three and one-half years of the medical curriculum, the student may enter upon a course in Public Health, designated as Public Health Curriculum C, involving one year of study in the College of Letters and Science and one-half year in the Medical School. On completion of the course, the degrees of Doctor of Medicine and Graduate in Public Health (Gr. P.H.) will be conferred.

In the cases of persons holding the degree of Doctor of Medicine from acceptable schools, the curriculum required will be determined by the Committee on Public Health Study Lists.

## PUBLIC HEALTH CURRICULUM C

## FOURTH YEAR IN MEDICINE

## SECOND HALF-YEAR

<i>Subjects</i>	<i>Units</i>
Civil Engineering 109A .....	2
Civil Engineering 109B .....	1
Civil Engineering 123 .....	2
Civil Engineering 126 .....	2
Entomology 215 .....	3
Hygiene 104 .....	3
Hygiene 108 .....	3
Political Science 115B .....	1
Zoology 109c .....	1
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## FIFTH YEAR IN MEDICINE

## FIRST HALF-YEAR

<i>Subjects</i>	<i>Units</i>
Civil Engineering 111A .....	2
Civil Engineering 111B .....	1
Civil Engineering 123 .....	2
Civil Engineering 125 .....	2
Economics 110A .....	3
Nutrition 117 .....	3
Veterinary Science 117 .....	3
Political Science 115A .....	1
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	17

## SECOND HALF-YEAR

<i>Subjects</i>	<i>Units</i>
Medicine .....	2
Pediatrics .....	2
Field Work in Epidemiology (volunteer service in some health organization) .....	8
Research (with thesis) .....	6
	<hr/> 18

For general students in public health and graduates in sanitary engineering, provision is made in Public Health Curricula A and B, each leading to the degree of Graduate in Public Health. The instruction of the last year in each of these two curricula is given in the medical school. Outlines of these curricula will be found in the Announcement of the Graduate School and the Circular of Information.

Those who contemplate entering upon any one of the three curricula are advised to consult the Committee on Public Health Study Lists in advance. The membership of the committee is as follows: Dr. Sawyer (Chairman), Professors Lucas, Force, Hyde, and Lange.



## **GENERAL INFORMATION**

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## REGISTRATION

Applications for admission and for advanced standing must be addressed to the Dean of the Medical School, San Francisco. *They must be received at least one month prior to the beginning of the term to allow time for investigation.*

Students will not be admitted to Medical Courses until they have registered at the Office of the Secretary of the Medical School, Parnassus and Second avenues, San Francisco.

## FEES

The charge for tuition is one hundred and fifty dollars per annum, payable in two installments, August and January. Students will not be admitted to the courses until they have paid their fees for the ensuing semester. A key and breakage deposit of \$25 in the first and second years and of \$10 in the third and fourth years is required for the use of lockers and to cover the cost of material used in laboratories and possible damage to college buildings and equipment. At the close of each session the unexpended balance is returned to the student.

In the first year there is an additional fee of \$15 for dissecting material, \$5 for each part.

Students not appearing for examinations on specified dates will be required to pay a fee of five dollars for a special examination.

Students registered in the Medical School and taking less than the required amount of work in any given half-year are required to pay a proportionate fee for tuition. Such students must first obtain the permission of the Medical Faculty.

## MICROSCOPES AND BLOOD-COUNTING APPARATUS

Students are advised to purchase their own microscopes, but those who do not care to do so may rent one from the School at a cost of five dollars per annum with an additional charge of two dollars if an oil immersion lense is desired. Students using microscopes which belong to the School are liable for damage done the instruments while in their possession.

*The character of the practical work requires that each student own a blood-counting apparatus. This should be purchased at the beginning of the second half of the second year.*

### MEDICAL SUPERVISION OVER STUDENTS

Each year the Faculty appoints a medical adviser to the students in the Medical School. This officer keeps a definite hour for consultation and when necessary visits students in their homes. Through him the services of specialists are secured when indicated.

Students of the first and second-year classes are entitled to the advantages offered by the University of California Students' Infirmary in Berkeley. Students resident in Berkeley and requiring hospital care are provided for in the Infirmary without charge, unless special nurses are necessary. Students of the third and fourth classes are similarly provided for in the University Hospital. A number of beds have recently been endowed for this purpose.

Medical students, as well as all other students, in the University of California are required to pass a physical examination by the Medical Examiner before entrance to the University.

### LIBRARIES

Instruction in the medical sciences and the various branches of clinical medicine is incomplete without constant reference to current and authoritative monographic and periodical literature. In research work the need of a complete reference library is obvious.

Each of the laboratories in Berkeley—*anatomy, physiology and physiological chemistry, pathology and bacteriology*—contains a separate departmental library which, although a unit of the general University Library, is thus segregated as part of the working equipment of each department. Through the generosity of Mrs. Phoebe A. Hearst and Mrs. William H. Crocker, these departmental libraries are unusually complete; they also participate in the annual distribution of University Library funds.

The library in connection with the University Hospital contains a good collection of text-books and monographs, which is increased each year through a special annual appropriation. The best current journals in French, German and English are on file.

### LABORATORIES AND CLINICAL OPPORTUNITIES

Medical instruction of the first year and a half is carried on in the separate departmental buildings, of *Anatomy, Physiology and Physiological Chemistry, and Pathology and Bacteriology* situated on the University Campus in Berkeley. The present laboratory buildings are regarded as temporary but are spacious and easily increased in size to meet growing demands; they are fully equipped not only for teaching but for research.

Instruction in pathology in its more practical relations to clinical medicine is pursued during the third and fourth year courses. Clinical Pathology is taught in the second half of the second year. This course in the coming year is given in the laboratories of the Dental School as the space in the hospital building has been devoted to small laboratories for interns and students.

## 1915 THE UNIVERSITY HOSPITAL

The University Hospital is essentially a teaching hospital under the control of the Board of Regents of the University of California. The medical affairs of the hospital are in charge of a committee composed of the heads of the various clinical departments and the Director of the Hooper Foundation; this arrangement secures the most thorough utilization of the patients for the purpose of instruction and research.

At present the Hospital contains 112 beds. Three wards on the second floor are devoted to Medicine, Surgery, and Gynecology. Accommodations are provided on the third floor for obstetrical patients and for children. An endowment fund and the support of the University makes free beds available for the study of interesting and unusual cases. The Associated Charities of San Francisco send to the hospital a number of deserving patients. Clinical material also is drawn from distant points. It is aimed to make this hospital a consulting place, to a great extent, for physicians of the State, a place where patients unable to pay for costly examinations or expert opinion may be sent for further investigation, returning to their own physicians with a report of the findings.

In order to increase laboratory and teaching facilities the training school for nurses has been removed from the hospital and installed temporarily in a separate building pending the erection of a nurses' home adjacent to the new hospital.

## THE NEW UNIVERSITY HOSPITAL

Six hundred and twenty-five thousand dollars has been contributed by friends of the University for the purpose of erecting a new hospital building. This is now in the course of construction and is located on Parnassus Avenue between Third and Fourth Avenues, directly adjoining the Medical School. The building will be completed by July 1916.

The site overlooks Golden Gate Park, the Presidio of San Francisco, San Francisco Bay, and the Pacific Ocean.



The hospital when completed will have a capacity of 216 beds of which 50 were assigned to each of the following services, viz., Medicine, Surgery, Women's, and Pediatrics. These different divisions are separated into distinct units, each pavillion extending back from the upper two floors of the main hospital building.

The main building will be seven stories in height and extends along the entire Parnassus Avenue frontage.

The floors are devoted respectively (1) to engine room, power plant, laundry and storage accommodations; (2) to kitchens, dining rooms, laundry and receiving department for ambulance patients; (3) the main or administrative floor, to students' lobby, and students' recreation room. At the extreme western end of this floor are quarters for the house staff; on this floor also are the offices of the department chiefs; (4) operating rooms and laboratories; (5) actinography, photography, drug department, and isolation department; (6 and 7) ward floors: these are divided into separate units from east to west, (a) Medicine, (b) Surgery, (c) Women's, (d) Children's. Each ward unit will be provided with its own teaching room and laboratory.

As the investigation of obscure diseases and the instruction of Medical Students and Post-Graduates are two of the chief aims of the Hospital, facilities for these purposes have been carefully provided.

There are five main operating rooms and two smaller operating rooms for use of the specialists. The approach to these for the use of students is separated from the corridors and rooms used for the transportation and preparation of patients—an arrangement which possesses great advantage for both students and the staffs of the operating rooms.

Similarly throughout the Hospital its efficiency as a teaching institution has been kept paramount. The plans are such that the Hospital may be doubled at comparatively small expense.

Through the various endowments the Hospital is able to maintain a high percentage of free beds.

#### THE SAN FRANCISCO HOSPITAL

The new San Francisco Hospital was occupied on July 1, 1915. The present group consists of an executive building, service buildings and sixteen large wards with well-arranged service rooms and with clinical laboratories adjacent.

One wing contains the surgical department with six large operating rooms and amphitheatres, a well equipped Roentgen-ray department and an emergency service. This group of buildings comprise one of the finest municipal hospitals in America and represents the latest ideas in hospital construction. The equipment of the hospital is modern and

complete in every respect. A pathological building is now under construction at a cost of \$150,000. Plans for the new tuberculosis and contagious buildings are under way.

The Medical School controls approximately 100 beds (exclusive of the tuberculosis wards). These are equally divided for the instruction of Clinical Medicine and Clinical Surgery. Additional wards are used for the teaching of Obstetrics and Pediatrics.

Laboratories fully equipped for the use of interns, students and for special investigations are under the supervision of a full-time Clinical Pathologist. Abundant post-mortem material is available.

The emergency department now attached to this hospital offers to students excellent opportunities in this branch of surgery. By a recent agreement with the City Board of Health a resident surgeon on the service of the University of California Medical School has been permitted.

#### OUT-PATIENT DEPARTMENT

The Out-Patient Department of the University Hospital provides facilities for instruction in all branches of clinical Medicine and Surgery. Diseases of every type are treated in the various clinics, each of which is under the supervision of a Chief who is responsible for the instruction of the students.

During the third year and the first half of the fourth year, groups of students are assigned to the Clinics in Medicine, Surgery, Women's, Pediatrics, Dermatology, Urology, Ophthalmology, Laryngology, Orthopedic Surgery, etc. In the last half of the fourth year students may elect to act as clinical clerks in some of the departments mentioned.

A large and varied clinical material is available and as evidence of the continuous growth of this department an increase of 57 per cent in the number of patients treated occurred during the year 1914-15. At present the daily average number of visits to the clinics is over 200.

A Social Service Department has been established in connection with the Out-Patient Department and medical students are impressed with the fact that the social condition of patients often bears a direct relation to their physical ailments and therefore must be taken into account if treatment is to be successful. The social service work is under the direction of Doctor Louise Morrow who brings to the work a knowledge of both Medicine and Sociology.

The various clinics are held simultaneously and by this arrangement patients may be referred from one clinic to another with great facility, thus affording opportunity for consultations.

**TUBERCULOSIS CLINICS**

The Department of Tuberculosis is under the charge of Dr. George H. Evans and is now maintained in conjunction with the San Francisco Society for the Study and Prevention of Tuberculosis. As soon as space is available this clinic will be established in conjunction with the Out-Patient Department of the University Hospital. Dr. Evans is also in charge of the University of California Medical School's service at the tuberculosis wards of the San Francisco Hospital. By this arrangement tuberculous patients of all types are available for investigation and teaching purposes.

**THE CANCER WARD**

Through the generosity of a friend of the Medical School a ward in the hospital is reserved for the treatment of patients suffering from malignant diseases. Advanced and inoperable cases are received as well as those not too far advanced to be benefitted by surgical or other treatment. Thus, the variety of cases and the long residence of certain of them afford an unusual opportunity to observe all phases of malignant diseases.

**THE HOOPER FOUNDATION FOR MEDICAL RESEARCH**

This Institution is located in an adjoining building to the Hospital and its Director is also Professor of Research Medicine in the Medical School. A number of beds in the Hospital are at the disposal of the Foundation and are occupied by patients suffering from diseases which at the moment are the subject of study and investigation by members of the Research Laboratory Staff.

Professor Whipple and his associates offer elective courses to the Medical Students and a limited number of students may undertake research problems. The selection of such students will depend upon their fitness for this work. Opportunities also will be afforded graduates in medicine who wish to enter upon a career of research.

**TEACHING FACILITIES AT THE CHILDREN'S HOSPITAL**

By a recent action of the governing bodies of the Children's Hospital and San Francisco Training School for Nurses the University has been granted the privilege of using the wards for teaching purposes and of appointing certain members of the hospital staff. The children's medical, surgical and orthopedic services are excellent, and the contagious pavillion offers instruction in diseases not available at the University and San Francisco Hospitals.

## ELECTIVE COURSES IN HOMEOPATHY

The Regents of the University recently accepted the proposal of the Hahnemann Medical College of the Pacific to cease teaching medicine and to offer elective courses in homeopathy in the University of California Medical School. The following paragraphs give a short outline of the adopted scheme.

1. Beginning in August 1915 all students matriculating in medicine must fulfill the requirements demanded by the University of California Medical School.

2. All students in the first two years will take all work in common except in *Materia Medica*. In this subject 32 hours of so-called "Regular" *Materia Medica* and 32 hours of Homeopathic *Materia Medica* will be given in the second half of the second year. Students may elect either one of these courses and hours of instruction are so arranged as to permit of election of both courses by all students who may so desire.

3. In the third and fourth years all students will take the same courses except in *Materia Medica* and Therapeutics and Clinical Medicine. Elective courses in these subjects will be offered so that students may choose whether they will take work under instructors of the so-called "Regular" or "Homeopathic" School. Instruction in Homeopathy will be in charge of two professors—a Professor of Homeopathic *Materia Medica* and a Professor of Applied Homeopathic Therapeutics.

## THE SHEFFIELD SANBORN SCHOLARSHIP

Through the generosity of Mrs. Frances B. Sanborn, one of the three scholarships known as the Sheffield Sanborn Scholarships has been assigned to the Medical School. This scholarship yields \$250 per annum at present and is open only to students who have not yet received the degree in Medicine and who otherwise would not have the opportunity to acquire a University training. Applications for this scholarship should be filed with the Recorder of the Faculties by March 20th of each year. A blank form of application may be obtained from the Recorder of the Faculties at Berkeley.

## HOSPITAL APPOINTMENTS

Internships in the University Hospital are open to eight graduates of the University of California Medical School or some other approved medical school. Interns serve for one year, without salary. The appointments are made upon the recommendation of the Medical Board of the Hospital who take into account both the character of the work of the candidate and his general fitness.

Internships in the San Francisco Hospital also are awarded to five members of the graduating class. Positions in some of the private hospitals in San Francisco are filled annually either upon recommendation of the Medical Faculty or by competitive examination.

The Regents of the University have provided positions at the University Hospital for a resident in Medicine, Surgery, Obstetrics and Gynecology, and Pediatrics, and an assistant resident in Pediatrics. These appointments, not necessarily limited to one year, are open to graduates in medicine who have had previous hospital experience and possess suitable qualifications for the work. The residents receive \$600 and the assistant resident \$300 a year and accommodations in the hospital.

The position of Resident Surgeon on the University of California Medical School service at the San Francisco Hospital has been established.

**PLAN OF INSTRUCTION AND  
ANNOUNCEMENT OF COURSES**



## PLAN OF INSTRUCTION

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### GENERAL STATEMENT

As in other departments of the University, instruction in the Medical School extends from the middle of August to the middle of May. The academic year is divided into half-years' of sixteen weeks' duration. The first half-year extends from August to the Christmas recess; the second from January to the close of the academic year.

The chief aim of the School is to develop medical practitioners and to offer facilities which will enable qualified students to prepare themselves for special medical work. The faculty is in sympathy with the principle which allows the student great freedom in choosing the direction his studies shall take. A system of instruction has been inaugurated which will permit wide choice in selecting the fourth year work. This radical departure from the old order, which required all students to pursue one and the same course, could not be effected suddenly, and at present, therefore, the amount of time allotted electives is somewhat less than will ultimately become available.

The course of instruction is in harmony with the principles adopted by the Association of American Medical Colleges. Following the terminology employed by that Association the amount of work required in various subjects is indicated by the number of hours devoted to them. But in the case of the fundamental sciences—Anatomy, Physiology, Biological Chemistry, Pharmacology, Pathology, and Bacteriology—the courses are also assigned a "unit" value such as other departments of this University employ. This expression is used since, under certain conditions, the subjects mentioned may be elected by non-medical students to fulfill the requirements for degrees other than the medical. In so far as the courses required for medical students are concerned, these units have no particular significance. The elective courses in these departments, however, may be taken by medical students in fulfilling requirements for a Master's degree, and the required courses may be counted in the combined course as fulfilling units for the A.B. degree, as well as part of the work for the M.D. degree.

In general, the University has adopted, as a standard, a unit of sixteen hours of didactic teaching, or forty-eight hours of laboratory work. The unit of demonstrative or clinical teaching occupies a middle ground of thirty-two hours. Thirty-two units represent the work of the average year. Exceptional students can carry two to four units more.



In general, the four years curriculum leading to the degree of Doctor of Medicine falls into three periods. First, that devoted to the fundamental medical sciences. Second, that occupied by clinical instruction. And, third, the elective period.

As the requirements for admission are such that the student enters after he has received training in physics, inorganic and organic chemistry, and biology, these subjects are not taught in the medical school. The first period of instruction covers three half-years and is devoted to anatomy, histology, physiology, biological chemistry, bacteriology, and pathology. Nearly all the work in these subjects is obligatory. They provide the basis for the study of clinical medicine; and the laboratory instruction which occupies the major portion of the student's time during this period is planned to develop powers of accurate observation.

Clinical instruction begins with the second half of the second year. The initial courses in medicine and surgery deal chiefly with the problems of diagnosis. They aim to train further the faculty of critical observation and to instill into the student good habits in taking case histories and in carrying out systematically the examination of patients. In this half-year, also, materia medica, pharmacology, and hygiene are taught.

Obligatory clinical instruction continues through the third year, and is given in the class-room, the clinical laboratory, the dispensary, and at the bedside. In the Out-Patient Department students take the histories of patients and make the necessary examinations under the direction of the attending staff. In the wards of the University Hospital and the San Francisco Hospital they are assigned cases for thorough study and have every opportunity to become familiar with therapeutic methods. During the first half of the fourth year the required work in medicine, surgery, gynecology, pediatrics and the various specialties will be completed.

At present the elective period of the fourth year consists of only the second half-year but eventually will include part of the first half-year. All departments of the School offer optional work, and in general three possibilities are open to the student: (a) He may elect a number of short courses with a view to becoming a general practitioner. (b) He may select a few long courses looking toward a career in some special field of practice. (c) He may devote his time to the laboratories of the fundamental sciences for the purpose of training as a teacher and investigator.

# ARRANGEMENT OF STUDIES, 1915-16

## FIRST YEAR

<i>Subject</i>	<i>Total Hours Required</i>
<b>First Half-year:</b>	
Histology .....	192
Anatomy .....	512
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	704
<b>Second Half-year:</b>	
Neurology .....	80
Physiology .....	336
Biochemistry .....	272
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	688

## SECOND YEAR

<b>First Half-year:</b>	
Topographical Anatomy .....	64
Morbid Anatomy and Histopathology .....	224
Bacteriology and Immunology .....	288
Electives .....	
	<hr/>
	576
<b>Second Half-year:</b>	
Hygiene .....	16
Pharmacology .....	96
Materia Medica, etc. ....	32
General Medicine and Clinical Pathology.....	240
Pediatrics .....	16
Neurology .....	16
Dermatology .....	16
General Surgery .....	144
Ophthalmoscopy .....	16
Obstetrics .....	16
	<hr/>
	608
<b>Homeopathic Materia Medica (elective) .....</b>	<b>32</b>

## THIRD YEAR

<i>Subject</i>	<i>Total Hours Required</i>
<b>First Half-year:</b>	
Hygiene .....	16
Materia Medica, etc. ....	16
Therapeutics .....	16
General Medicine and Clinical Pathology .....	128
Pediatrics .....	64
Neurology .....	32
Legal Medicine .....	16
Dermatology .....	16
General Surgery .....	128
Ophthalmology .....	48
Laryngology .....	48
*Obstetrics and Gynecology .....	128
Pathological Demonstrations .....	32
	<hr/>
	688

## THIRD YEAR

**Second Half-year:**

Therapeutics .....	32
General Medicine .....	128
Pediatrics .....	64
Neurology and Psychiatry .....	56
Legal Medicine .....	16
Dermatology and Syphilis .....	32
General Surgery .....	128
Ophthalmology .....	16
Laryngology, etc. ....	24
Urology .....	16
Obstetrics and Gynecology .....	112
Pathological Demonstrations .....	32

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 656

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\* Owing to a change in curriculum there is an apparent duplication in the second and third year courses during 1915-16.

**FOURTH YEAR**

<i>Subject</i>	<i>Total Hours Required</i>
<b>First Half-year:</b>	
General Medicine .....	144
*Pediatrics .....	96
*Neurology and Psychiatry .....	32
*Legal Medicine .....	16
General Surgery .....	192
Orthopedic Surgery .....	48
Urology .....	48
*Laryngology etc. ....	32
Gynecology .....	32
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	640
 <b>Second Half-year:</b>	
Electives .....	560

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\* Owing to a change in curriculum there is an apparent duplication in the third and fourth year courses during 1915-16.

## DEPARTMENTS OF INSTRUCTION

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### ANATOMY

HERBERT MCLEAN EVANS, B.S., M.D., Professor of Anatomy.  
ROBERT ORTON MOODY, B.S., M.D., Associate Professor of Anatomy.  
GEORGE W. CORNER, A.B., M.D., Assistant Professor of Anatomy.  
PHILIP E. SMITH, B.S., M.S., Ph.D., Instructor in Anatomy.  
FELIX H. HURNI, B.S., Assistant in Anatomy.  
KATHERINE J. SCOTT, A.B., M.D., Assistant in Anatomy.

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EDWARD F. MILLER, Technical Assistant in Anatomy.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

### MICROSCOPIC ANATOMY

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure

can not be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) For the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology. (2) The transition from the macroscopic to the microscopic conditions is made with the dissecting microscope and teasing methods, free hand or frozen sections. (3) The more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens.

**101. Histology and Microscopic Organology.**

Professor EVANS, Assistant Professor CORNER and Dr. SCOTT.

The course is given from the view point of the activities of the living cell, the relation between structure and function being held uppermost. At the same time opportunity is afforded for a comprehensive review of human and comparative histology. Individual loan collections supplement the laboratory work.

First half-year; 3 laboratory and 3 lecture periods a week, M W, 8-12;  
F, 8-11; S, 11-12. 6 units.

**103. Organs of Special Sense and Neurology.**

Assistant Professor CORNER and Dr. SCOTT.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neuron studied in course 101 is used at the unit in the construction of the nervous system with a view of tracing origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to a consideration of the growth and development of the nervous system.

First year, second half; 2 lectures, and 1 laboratory period a week.  
F, 8-9 and 1-5. 3 units.

**2. Histological Technique.**

Mr. MILLER.

An elective course for those wishing to familiarize themselves with the special technical methods in embryological and histological investigations.

*Hours to be arranged.*

## GROSS ANATOMY

## 105. Head and Neck.

Dr. SMITH.

First year, first half. Tu Th, 8-12; S, 8-11; M Tu W Th F, 1-5.

3½ units.

## 106. Arm and Thorax.

Associate Professor MOODY and Mr. HURNI.

First year, first half. Tu Th, 8-12; S, 8-11; M Tu W Th F, 1-5.

3½ units.

## 107. Leg and Abdomen.

Associate Professor MOODY and Mr. HURNI.

First year, first half. Tu Th, 8-12; S, 8-11; M Tu W Th F, 1-5.

3½ units.

## 108. Regional and Topographical Anatomy.

Associate Professor MOODY and Dr. SCOTT.

Living models, special dissections and sections of the body are used in this course to enable the student to become more familiar with structural relations and to assemble information obtained in preceding dissections. Students who are accepted for course 210 may substitute that course for course 108.

Second year, first half. Sec. I, Tu, 8-9, F, 8-11; Sec. II, Tu, 9-10, W, 1-4.

3 units.

## 109. Anatomy for Physicians and Advanced Students.

Professor EVANS and Associate Professor MOODY.

Hours to be arranged to suit applicants.

## ELECTIVES

## 210. Original Investigation.

Professor EVANS and other members of the staff.

Students and others who are prepared to undertake research in any of the anatomical sciences will be given facilities and encouragement by members of the staff. Time devoted by the majority of the second year class to course 108 can be applied here by those specially qualified.

*Hours optional.*

## 211. Seminar.

Topics will be discussed by the staff and those electing the course. For the year 1915-16 topics will be chosen from the field of human and comparative embryology.

*Hours to be arranged.*

## PHYSIOLOGY AND BIOCHEMISTRY

SAMUEL STEEN MAXWELL, Ph.D., Associate Professor of Physiology.  
T. BRAILSFORD ROBERTSON, Ph.D., Sc.D., Associate Professor of Bio-Chemistry.  
THEODORE C. BURNETT, M.D., Assistant Professor of Physiology.  
CHARLES B. BENNETT, Ph.D., Instructor in Bio-Chemistry.  
ROSALIND WULZEN, Ph.D., Instructor in Physiology.  
LILLIAN M. MOORE, M.S., Assistant in Physiology.  
WALLACE B. BEEBE, A.B., Assistant in Physiology.

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L. R. BEAUCHAMP, Technician.  
P. E. BRINSTAD, Helper in Physiology.

The required courses are 103, 104 and 106. The remaining courses are open to those students who have the time and the preparation necessary to pursue them with profit.

Attention should be called to the fact that the equipment of the department offers unusual opportunities for research both in the Rudolph Spreckels Laboratory at Berkeley and in the Herzstein Research Laboratory at New Monterey.

The equipment in the Rudolph Spreckels Physiological Laboratory comprises in addition to the apparatus and conveniences for the customary lines of work in mammalian physiology ample facilities for research in physiological chemistry and experimental biology. The department library contains complete sets of all the important physiological journals, and the more important monographs on physiological and related subjects. The Herzstein Research Laboratory at New Monterey offers facilities for the investigation of problems in marine biology.

### 103M. Biochemistry.

Associate Professor ROBERTSON and Dr. BENNETT.

In this course the foodstuffs are followed up from the moment that they are ingested to the moment when, after having circulated through the tissues and shared in their life, their final products are excreted from the body. The course may be considered as consisting of six parts, corresponding with various phases of the cycle of changes which the foodstuffs undergo. These divisions of the course are the following:



1. The foods; their properties, assimilation, and conversion into living matter or into reserve materials. The consideration of this phase of the subject takes the student to the point at which the foods have really become living matter or reserve-materials. This leads naturally to the second part of the subject, namely:

2. The manner in which the physical and chemical properties of the foods determine the properties of living protoplasm.

3. The correlation of the different activities of the tissues in so far as this is brought about by chemical agents which are distributed through the agency of the circulation.

4. The chemical phenomena which accompany or underlie the performance of function by living tissues.

5. The waste-products, their chemical nature, their derivation, and, to some extent, the method of excretion.

6. Regarding the entire body as a chemical machine, the efficiency of this machine is discussed and the relationship between the work it can perform and the nature of the fuel with which it is supplied.

First year, second half. Lectures, M Tu W Th, 1-2, F, 9-10; laboratory, M Tu W Th, 2-5. *9 units.*

#### **104M. Physiology.**

Associate Professor MAXWELL, Assistant Professor BURNETT, and Dr. WULZEN.

The physiology of nerve, muscle, central nervous system, sensation, circulation, respiration and secretion. The lectures cover in a systematic way the general subject-matter of the topics stated above. Laboratory experiments are so arranged that the most important fundamental observations are repeated. Attention is given to technique as well as to results. Continual use of the reference library is insisted upon. In addition to the routine work required alike of all students, each member of the class is required to demonstrate some special piece of experimental work; the demonstration is accompanied by a paper by another student on the subject which the demonstration illustrates, and each of the two hands in a carefully prepared bibliography. Thus each student is responsible for one demonstration, one paper, and two bibliographies.

First year, second half. Lectures, M Tu W Th S, 11-12, F, 10-11; laboratory, M Tu W Th S, 8-11. *10 units.*

- 106. Pharmacology.** Associate Professor ROBERTSON.  
 The physiological action of drugs, with illustrations derived from  
 their therapeutic application, and practical demonstrations.  
 Second year, second half. F, 6 hours weekly. 96 hours.

**ELECTIVES**

- 210. Experimental Biology.** Dr. WULZEN.  
 Special problems in cell physiology and the tropisms. Open to properly  
 qualified students. Hours and credits by arrangement.
- 211A. Advanced Physiology.** Associate Professor MAXWELL.  
 Some simple piece of research is repeated and extended in connection  
 with a study of the original literature on the subject. Open to a  
 few suitably prepared students.  
 Laboratory three afternoons a week, with occasional lectures and conferences. 4 units.
- 211B. Advanced Chemical Biology.** Associate Professor ROBERTSON.  
 Special topics may be selected by the student in conference with the  
 professor as subjects of advanced and intensive study.
- 212. Research in Physiology.** Associate Professor MAXWELL.  
 Hours, subjects and credits by arrangement with Professor Maxwell.
- 213. Research work in Physiological Chemistry.**  
 Associate Professor ROBERTSON.  
 Open to students who have the necessary time at their disposal and  
 who have the necessary training. The subject of the research  
 and the time to be devoted to it to be arranged in conference with  
 Professor Robertson.

**PATHOLOGY AND BACTERIOLOGY**

- FREDERICK P. GAY, A.B., M.D., Professor of Pathology.  
 GLANVILLE Y. RUSK, A.B., M.D., Associate Professor of Pathology.  
 IVAN C. HALL, M.S., Assistant Professor of Bacteriology.  
 JEAN V. COOKE, A.B., M.D., Assistant Professor of Pathology.  
 GRACE F. GRIFFITHS, B.S., Instructor in Bacteriology.  
 — — —, Research Associate in Pathology.  
 HENRY T. CHICKERING, A.B., M.D., Research Assistant in Pathology.  
 JOHN M. REHFISCH, M.D., Assistant in Pathology and Bacteriology.  
 DOLORES E. BEADLEY, B.S., Assistant in Bacteriology.  
 RUTH L. STONE, B.S. Assistant in Bacteriology.

Instruction in pathology and bacteriology is given in the Hearst  
 Laboratory of Pathology and Bacteriology, in Berkeley during the second

year and at the University Hospital and the San Francisco Hospital during the third and fourth years.

The course in pathology aims to outline the natural history of disease. The instruction is for convenience divided into three correlated courses dealing respectively with causation, progress and effect.

#### SECOND YEAR

##### 101. Bacteriology and Protozoology.

Assistant Professor HALL, Miss GRIFFITHS and Miss BRADLEY.

Bacteriological methods are first taught; the preparation of culture media, the isolation of bacteria in pure culture, and the morphology and cultural characteristics of bacterial species. The pathogenic bacteria are then taken up in relation to specific diseases. The lower animal parasites concerned in systemic diseases are then considered. Lectures are employed for outlining general principles, the work being largely practical.

Second year, first half. M Tu Th F, 1-5. Alternating with course 102. 4 units.

##### 102. Infection and Immunity. Professor GAY and Miss GRIFFITHS.

The course presents the most accessible aspects of functional pathology. It traces the evolution of infectious diseases in the body and the mechanism of animal defense. Experimental methods of studying infection are demonstrated and so far as practicable carried out by the student. A systematic course of lectures will outline the principles of immunology with a consideration of their applicability in the diagnosis and treatment of disease.

Second year, first half. Lectures M W and alternate F, 11-12; laboratory M Tu Th F, 1-5. Alternating with course 101. 3 units.

##### 103. Morbid Anatomy and Histopathology.

Associate Professor RUSK and Dr. REHFISCH.

The organ and tissue changes in diseases in the animal and particularly in the human body will be studied in this course. Macroscopic lesions will be illustrated by fresh material from autopsies and museum specimens, and the microscopic appearances will be studied by means of a loan collection of prepared slides. Experimental lesions are used to emphasize the evolution of such processes. The course includes systematic instruction in the conduct of autopsies at the Alameda County Hospital at which the students assist in small groups. This course, while largely practical, is considered systematically in lectures and conferences.

Second year, first half. M W Th S, 8-11. 6 units.

**THIRD YEAR**

**104. Autopsy Course and Demonstration of Autopsy Material.**

Assistant Professor COOKE.

During the school year over 100 autopsies are performed at the University Hospital and the University of California Service of the San Francisco Hospital. Provision is made for students of the third and fourth years to attend these autopsies. Members of the third year class under the supervision of Dr. Cooke perform the autopsies, correlate clinical and post mortem findings, make gross descriptions of the lesions found and later describe the microscopic appearance of the tissues.

First and second half-years, Tu and F.

32 hours.

**ELECTIVES**

**201. Research. Problems of Infection and Immunity.** Professor GAY.

*Hours and units to be arranged.*

**202. Research. Neuropathology.**

Associate Professor RUSK.

*Hours and units to be arranged.*

**203. Research. Bacteriology and Protozoology.**

Assistant Professor HALL.

The investigation of concrete problems suggested by the work in medical bacteriology.

*Hours and units to be arranged.*

**204. Advanced Morbid Anatomy and Histopathology.**

Assistant Professor COOKE.

An elective course for fourth year and graduate students in medicine, comprising autopsy technic and the working up of tissue and cultures resulting from post-mortem examination.

Fourth year, second half. University Hospital.

*Hours and units to be arranged.*

**205. Seminar in Pathology.**

The STAFF.

Reports and discussions of current advances and individual research in the field covered by the department. Open to Medical Students and Graduate Students.

Throughout the year, beginning September 2. Alternate Th, 8 P.M.

*No credit.*

**206. Experimental Pathology.**Associate Professor **RUSK** and Dr. **REHFISCH**.

An elective course to which a limited number (not over six) especially qualified students will be admitted. Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alterations will be undertaken and the results demonstrated to those in Pathology 103, which latter course it is intended to supplement. Special problems may also be undertaken. This course may also be taken as a graduate course by special arrangement.

**HYGIENE AND PREVENTIVE MEDICINE**

**WILBUR A. SAWYER, A.B., M.D.,** Lecturer in Hygiene and Preventive Medicine.

**SECOND YEAR****101A. Lectures and Demonstrations in Hygiene and Preventive Medicine.****Dr. SAWYER.**

The course in Hygiene, Public Health, and Preventive Medicine, through the courtesy of the State Board of Health, is given by Doctor Sawyer, Director of the State Hygienic Laboratory and is designed to meet the need of those who are to become medical practitioners. While fairly comprehensive in scope, it is not offered as a substitute for the especial training necessary to equip medical health officers. It does aim to emphasize the exact relations of the private practitioner to the public health. The scope of the course will include the following topics: The legal mechanism for the control of disease, vital statistics, transmissible diseases and their epidemiology, occupational diseases, milk supply in relation to public health, water supply and sewage disposal, food supply, meat inspection, disinfection, economic cost of diseases, saving through conservation, etc.

Second half-year, once a week.

**16 hours.****THIRD YEAR****101B. Lectures and Demonstrations in Hygiene and Preventive Medicine.****Dr. SAWYER.**

A continuation of course 101A.

First half-year, once a week.

**16 hours.**

**MATERIA MEDICA AND THERAPEUTICS**

**EUGENE S. KILGORE, B.S., M.D.,** Instructor in Medicine.

**ALBERT SCHNEIDER, Ph.D., M.D.,** Instructor in Materia Medica.

**RENÉ BINE, M.D.,** Assistant in Medicine.

**SECOND YEAR**

**101A. Lectures and Demonstrations in Materia Medica. Dr. SCHNEIDER.**

This course supplements the courses in Experimental Pharmacology and Therapeutics and will include lectures on the history of medical schools and cults; the source of drugs and medicines; newer remedies; the principal drugs used in modern medicine; the quality and purity of drugs and medicines; federal and state laws governing the quality and purity of drugs; general toxicology; physiological antagonism; chemical incompatibility and prescription writing. Considerable attention will be given to the newer biological products used in medicine including a discussion of their manufacture, standardization and use. The work is to be supplemented by class demonstrations explaining the more important general pharmaceutical processes, methods of alkaloidal extraction, chemical and physiological drug assaying, etc. Some attention will also be given to posology, drug habits, and habit-forming drugs; and the so-called narcotic drugs with the laws governing their sale.

Second half-year, twice a week.

*32 hours.*

**THIRD YEAR**

**101B. Lectures and Demonstrations in Materia Medica. Dr. SCHNEIDER.**

A continuation of Course 101.

First half-year, once a week.

*16 hours.*

**102A-102B. Lectures and Recitations in Therapeutics.**

**Drs. KILGORE and BINE.**

Lectures, recitations, demonstrations and practical exercises on the medical treatment of disease. By the use of material in the wards, emphasis is placed upon the application of therapeutic principles. Students are required to write specific directions for patients and for nurses and to execute many of the orders themselves. Comparatively few drugs are used. These occupy an important but by no means exclusive place in the teaching. Special attention is given to biologic methods, to diet, hydrotherapy, massage and other physical and mechanical measures.

First half-year, once a week; second half-year, twice a week.

*48 hours.*

**MEDICINE\***

HERBERT C. MOFFITT, B.S., M.D., Professor of Medicine.  
WILLIAM WATT KERR, A.M., C.M., M.D., Clinical Professor of Medicine.  
GEORGE H. EVANS, M.D., Assistant Clinical Professor of Medicine.  
HERBERT W. ALLEN, B.S., M.D., Assistant Clinical Professor of Medicine.  
GEORGE E. EBRIGHT, M.D., Instructor in Medicine.  
EUGENE S. KILGORE, B.S., M.D., Instructor in Medicine.  
LEWIS S. MACE, A.B., M.D., Instructor in Medicine.  
LEROY H. BRIGGS, M.D., Instructor in Medicine.  
JAMES L. WHITNEY, A.B., M.D., Instructor in Medicine.  
RENE BINE, M.D., Assistant in Medicine.  
JULE B. FRANKENHEIMER, B.S., M.D., Assistant in Medicine.  
HARRY E. FOSTER, M.D., Assistant in Medicine.  
ELDRIDGE J. BEST, B.S., M.D., Assistant in Medicine.  
HANS LISSER, A.B., M.D., Assistant in Medicine.  
ERNEST H. FALCONER, C.M., M.D., Assistant in Medicine.  
LOVELL LANGSTROTH, A.B., M.D., Assistant in Medicine.  
ISADORE C. BRILL, A.B., M.D., Assistant in Medicine.  
JOSEPH H. CATTON, B.S., M.D., Voluntary Assistant in Medicine.  
ESTHER ROSENCRANTZ, A.B., M.D., Voluntary Assistant in Medicine.

Instruction in Medicine is given both at the University Hospital and at the San Francisco Hospital.

At present students begin their work in this department at the University Hospital during the second semester of the second year. Two general introductory courses bridge the gap between the fundamental sciences and clinical medicine. Stress is laid upon instruction in history taking and physical diagnosis, and an endeavor is made to drill the student thoroughly at the very beginning in what may be termed a standard medical technic. This uniform technic in history taking, in recording physical and laboratory examinations will be applied in all the student's later dispensary and ward exercises and will be carried even farther into his work as clinical clerk and interne.

Pharmacology and Materia Medica are taught in this half-year, and thus students are prepared for their work in Therapeutics in the third year.

In the first half-year of the session 1915-16 instruction in clinical medicine will be given the third year class at the University Hospital and the fourth year class at the San Francisco Hospital. In the second half-year the fourth year class is offered elective courses at the University Hospital, while the third year receives clinical instruction at the San Francisco Hospital.

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\* The Department of Medicine includes Neurology and Dermatology.

**SECOND YEAR**

**101. Propedeutics of Medicine.**

**Professor MOFFITT.**

Clinical lectures and demonstrations. Great emphasis will be laid upon cultivation of the student's power to observe. Obvious clinical phenomena or typical pictures of disease will be demonstrated at the beginning of the course, such as jaundice, pigmentation, cyanosis, edema, ascites, anemia, myxedema, Basedow's disease, tumors, peculiar gait. Later on important symptoms as dyspnoea, vomiting, cough, pain, polyuria, etc., will be considered, with special reference to their physiological interpretation. Still later cases will be demonstrated (particularly cases of nervous disease, paralysis, muscle atrophies, disturbances of reflexes, brain tumors) that will serve to illustrate the relation of anatomical and physiological knowledge to clinical phenomena.

Second half-year, once a week.

*16 hours.*

**102. Physical Diagnosis and History Taking.**

**DR. KILGORE, BIGGS, WHITNEY, BINE, BEST, LISSER, and LANGSTROTH.**

A few lectures on the method of history taking and on certain general chapters of physical diagnosis will be delivered to the entire class. Practical exercises in the wards and Out-Patient Department will be given to sections of not more than six. Cabot's *Physical Diagnosis* and Sahli's *Untersuchungsmethoden* will serve as textbooks.

Second half-year.

*Each student, 80 hours.*

**103. Clinical Physiology.**

**Professor MOFFITT and Dr. KILGORE.**

Lectures, recitations and demonstrations. The object of these exercises is to point out at the beginning of the student's clinical experience some of the more direct practical applications of physiology. Special emphasis is laid upon those facts which have been learned by personal laboratory experimentation. Certain disorders of nervous and cardiac mechanism, hemodynamics, respiration, digestion, etc., are considered.

Second half-year, three times a week.

*48 hours.*



**104. Clinical Pathology.**

Dr. FALCONEB.

Training in the chief laboratory methods used in the clinic. The student is taught to use in an efficient way knowledge already gained in his courses in physiology and pathology. Examinations are made of blood, urine, sputum, stomach contents, feces and of ascitic, pleural and cerebrospinal fluids. The material is derived from the medical wards and Out-Patient Department in which the student is at work so that emphasis can be laid upon the correlation of clinical and laboratory findings.

Second half-year, twice a week.

96 hours.

**THIRD YEAR****105A-105B. Clinical Medicine.**

Professor MOFFITT.

Lectures, demonstrations, ward visits and quizzes. During the course of the year's instruction important diseases will be illustrated, as far as possible, by suitable cases. Interesting patients seen by the students in the Out-Patient Department can be taken into the wards and more carefully studied.

First and second half-years (U. C. H.), twice a week.

64 hours.

**106A. Clinical Medicine.**

Professor KERR.

This course consists of clinics, clinical conferences, lectures and demonstrations upon the material in the medical wards of the San Francisco Hospital.

Second half-year (S. F. H.), twice a week.

32 hours.

**107. Clinical Demonstrations and Recitations.**

Dr. EBRIGHT.

Students are assigned patients for observation and study. Subsequently, their findings are criticised by the instructor and the case is made the basis of a recitation.

Second half-year (S. F. H.), once a week.

16 hours.

**108A-108B. Section Work in Wards and Out-Patient Department.**

Drs. EBRIGHT, KILGORE, BRIGGS, WHITNEY, and FRANKENHEIMER.

Practical work in history taking and physical diagnosis to supplement the courses of the second year. Stress is laid upon the careful preparation of case records.

First half-year (U. C. H.).

Each student 96 hours.

Second half-year (S. F. H.).

Each student 48 hours.

**FOURTH YEAR**

- 106B. Clinical Lectures and Demonstrations.** Professor KERR.  
This is a continuation of course 106A.  
First half-year (S. F. H.), twice a week *32 hours.*
- 109. Section Work at San Francisco Hospital.**  
Assistant Professor EVANS and Drs. EBRIGHT, MACE and FRANKENHEIMER.  
Clinical demonstrations in the Medical and in the Tuberculosis Wards will comprise an important part of this course. The class will be divided into small sections and history taking, methods of examinations (with special reference to early recognition of the disease) and treatment will be taught.  
First half-year. *Each student 48 hours.*
- 110. Ward Work at University Hospital.** The STAFF.  
Medical cases in the wards are assigned to the senior students. The student puts into practical use the knowledge gained in the third year in methods of history taking, physical and laboratory examinations, and differential diagnosis. The cases are worked up and recorded independently of the hospital records, handed in to the instructor and discussed informally.  
First half-year. *Each student 48 hours.*  
For electives in this department see page 83.

**RESEARCH MEDICINE**

**THE GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH**

GEORGE H. WHIPPLE, A.B., M.D., Professor of Research Medicine.

ERNEST L. WALKER B.A.S., S.D., Associate Professor of Tropical Medicine.

KARL F. MEYER, A.B., D.V.M., Associate Professor of Tropical Medicine.

RUDOLPH A. KOCHER, A.B., M.D., Instructor in Research Medicine.

SAMUEL H. HUBWITZ, A.M., M.D., Instructor in Research Medicine.

CHARLES W. HOOPER, A.B., M.D., Instructor in Research Medicine.

FREDERICK H. RODENBAUGH, B.S., M.D., Fellow in Research Medicine.

ZENO OSTENBURG, M.A., Fellow in Research Medicine.

RUSHMER C. CHRISTIANSEN, M.D., Fellow in Research Medicine.

WALTER C. ALVAREZ, M.D., Voluntary Assistant in Research Medicine.

Facilities for work in Research Medicine are available during the entire year for those who have had the necessary training. The experimental work is open to students of the second, third and fourth years

of the Medical School as well as graduates in Medicine and advanced students who have proper training.

The fundamental value of such work for the student lies in the training of the *method of research*. In this manner the student is given an opportunity to help in working out some small research problem and an insight into medical research can be gained in no other way.

Candidates for elective work in the Research Laboratory are expected to devote at least the time equivalent to a double course in this subject.

#### **201. Experimental Medicine.**

Professor WHIPPLE, Drs. HURWITZ and HOOPER.

Students who have had sufficient training will be given opportunity to work on some problem related to the research work of the Laboratory Staff. This work will be carried on under the personal supervision of the members of the Laboratory Staff and the student in reality will be treated as a voluntary assistant in Research Medicine.

*Arrangements may be made with Professor Whipple.*

#### **202. Lecture Course on Selected Topics of Tropical Medicine.**

Associate Professors WALKER and MEYER.

The lectures, which are enhanced if possible by clinical and laboratory demonstrations are intended to give the medical student and the public in general some idea of recent progress in tropical medicine and its importance in California. Particular attention is also paid to problems and conditions in California: Malaria, Uncinariasis, Plague, Leprosy, etc.

These lectures are open to the public.

Second half-year. S, 10-11.

*16 hours.*

#### **203. Research in Tropical Medicine.**

Associate Professors WALKER and MEYER.

Problems in protozoology, bacteriology, zoology, and immunity.

This course is only open to students who have attended 202.

*Hours to be arranged.*

#### **204. Research on Applied Clinical Bacteriology and Immunology.**

Associate Professor MEYER.

This course is open to students or graduates who have taken Pathology 101 and 102 or equivalent.

*Hours to be arranged.*

**205. The Chemistry of Metabolism.**

**Dr. KOCHER.**

Laboratory training is offered in methods for the study of metabolism.

The student is given exercises in the quantitative estimation of rest-nitrogen, urea, ammonia, uric acid, and glucose in the blood; and in the determination of the total-nitrogen, urea, ammonia, uric acid, glucose, creatinin etc., in the urine. Due consideration is given to the application of these methods to the investigation of pathological and physiological problems.

*Time to be arranged.*

**CLINICAL NEUROLOGY AND PSYCHIATRY**

MILTON B. LENNON, A.B., M.D., Instructor in Neurology.

ROBERT L. RICHARDS, A.B., M.D., Lecturer in Psychiatry.

V. H. PODSTATA, M.D., Lecturer in Psychiatry.

RICHARD W. HARVEY, M.S., M.D., Instructor in Neurology.

EVA C. REID, M.D., Assistant in Psychiatry.

CHARLES L. TRANTER, B.S., M.D., Assistant in Neurology.

**SECOND YEAR**

**101. Elementary Clinical Neurology.**

**Dr. LENNON.**

In this course the general symptomatology of diseases of the nervous system will be particularly considered. The relation of anatomy and physiology as taught in the earlier half-years will be applied to clinical cases. Stress will be laid on the method of taking neurological histories and the of making routine examinations.

Second half-year, once a week.

*16 hours.*

**THIRD YEAR**

**102A-102B. Lectures and Demonstrations in Clinical Neurology.**

**Dr. LENNON.**

In addition to the didactic instruction which is illustrated by the projectoscope, ward-teaching is a feature of this course. Students are assigned cases for study and diagnosis. Their conclusions are criticised by the instructor.

First and second half-years, once a week.

*32 hours.*

**103A-103B. Clinical Lectures in Psychiatry.**

Drs. RICHARDS and PODSTAT.

In this course the more important mental diseases are selected for discussion. The early manifestations of insanity, the relation of specific organs to certain types of mental derangement, and the modern treatment of the insane receive particular emphasis.

First and second half-years, once a week.

*32 hours.***104. Section Work.**

Drs. LENNON and TRANTER.

The class is divided into sections for work in the Out-Patient Department.

Second half-year.

*Each student 24 hours.***FOURTH YEAR****105. Section Work.**

Drs. LENNON, REID and TRANTER.

Students act as clinical assistants in the Out-Patient Clinic.

First half-year.

*Each student 32 hours.*

For electives in this department see page 84.

**DERMATOLOGY**

HOWARD MORROW, M.D., Clinical Professor of Dermatology.

L. S. SCHMITT, B.S., M.D., Instructor in Dermatology.

A. W. LEE, M.D., Instructor in Dermatology.

F. H. ZUMWALT, M.D., Assistant in Dermatology.

Instruction in this department is carried on during the last half of the second year and both halves of the third year. Work in the fourth year is elective. During the third year students visit the San Francisco Isolation Hospital where leprosy, variola and varicella are demonstrated. Instruction is also given on the clinical aspects and the various laboratory procedures used in the diagnosis of syphilis.

**SECOND YEAR****101. Clinical Lectures and Recitations.**

Professor MORROW.

Clinical lectures and demonstrations intended to teach the student to observe objective symptoms and describe them correctly. The common diseases of the skin will be demonstrated.

Second half-year, once a week.

*16 hours.*

**THIRD YEAR**

**102A-102B. Clinical Lectures and Demonstrations. Professor MORROW.**

A systematic course covering histopathology, diagnosis and treatment of diseases of the skin.

First and second half-years, once a week. 32 hours.

**103. Syphilis. Lectures and Recitations. Dr. SCHMITT.**

This course includes lectures, demonstrations and recitations on syphilis in all of its phases. The clinical and laboratory procedures used in its diagnosis are also discussed.

Second half-year, once a week. 16 hours.

For electives in this department see page 85.

**LEGAL MEDICINE**

A. A. D'ANCONA, A.B., M.D., Lecturer in Forensic Medicine.

In this department students receive instruction in the legal aspects of medicine. In general the course covers the following subjects: (1) Technique of medico-legal post-mortem examinations; (2) Toxicology from the chemical and legal points of view; (3) Biological aspects; (4) Legal regulation of medical practice, rules of evidence, etc. In order to set forth the various points of view of this subject, this course is given by several lecturers.

**THIRD YEAR**

**101A-101B. Lectures.**

First and second half-years, once a week. 32 hours.

**PEDIATRICS**

WILLIAM PALMER LUCAS, A.B., M.D., Professor of Pediatrics.

RACHEL L. ASH, B.S., M.D., Instructor in Pediatrics.

OLGA BRIDGMAN, Ph.D., M.D., Instructor in Pediatrics.

ELLEN S. STADTMULLER, A.B., M.D., Assistant in Pediatrics.

ETHEL M. WATTERS, A.B., M.D., Assistant in Pediatrics.

VIVIA BELLE APPLETON, A.B., M.D., Assistant in Pediatrics.

LINTON GERDINE S.B., M.D., Assistant in Pediatrics.

— — —, Assistant in Pediatrics.

LOUISE MORROW, A.B., M.D., Head of Social Service Department and  
Lecturer in Medical Social Economics.

The teaching material of the Department is drawn from the following sources:

(1) The children's wards of the University Hospital and the nursery of the Woman's Clinic. This gives an opportunity for studying normal breast feeding and the problems entering into the first two weeks of infant life as well as the diseases of infancy and childhood which are admitted into the general children's wards. (2) The Out-Patient Department which is used for sectional teaching during the fourth year which gives opportunity for following normal feeding cases referred from both Woman's Clinic after they are discharged from the hospital, and various ambulatory diseases of infancy and childhood which can only be followed in a large Children's Clinic. (The Children's Out-Patient Clinic had a total of 8777 visits during the last fiscal year. This gave a large amount of most interesting material, an average of 730 visits a month or an average of over 28 daily visits.) Home visits are made in cases where the home conditions are of importance or the patient's condition indicates it. (3) The medical wards of the Children's Hospital which will be used for section work during the fourth year. (4) The children's wards of the San Francisco Hospital. (5) The Isolation Hospital where every variety of contagious disease can be demonstrated. (6) The State Home for the Feeble-Minded and other institutions dealing with child welfare work; special trips may be made to these institutions.

Through close co-operation with the academic departments of the University opportunity is offered for work along the special lines of psychology, social economics and dietetics. These departments furnish assistants and lecturers on special topics related to childhood. Through co-operation with state and city child welfare institutions, an opportunity will be given (to those electing special work in Pediatrics) to study the organization and work of these institutions.

During the year a series of lectures will be given on subjects closely related to the practice of Pediatrics and child welfare work. During the year 1914-15 the following subjects were covered:

Vital Statistics and Birth Registration by Allen F. Gillihan, M.D.

Medical School Inspection by Thomas Maher, M.D.

Recreation in its Relation to Medicine by James Edward Rogers.

Organized Charity Work for Children by Katherine Felton.

The Practice of Pediatrics by E. C. Fleischner, M.D.

Medical Social Service by Jessica Peixotto, Ph.D.

**SECOND YEAR**

**101. Lectures and Recitations.** Professor LUCAS.

The course consists of lectures and clinical exercises dealing with the normal development of the infant, prenatal work, normal breast feeding, substitute feeding, physiology and metabolism of infancy, infant welfare work and other sociological phases of infancy and childhood. Special emphasis will be laid on preventive work in infancy and childhood.

Second half-year, once a week.

*16 hours.*

**THIRD YEAR**

**102. Lectures, Recitations, Laboratory Work and Clinical Demonstrations.** Professor LUCAS and Staff.

The material for instruction is drawn from the children's wards of the University Hospital, the Out-Patient Department of the University Hospital, and the Isolation Hospital (by courtesy of the San Francisco Board of Health and Dr. A. A. O'Neill). The course consists of lectures and clinical exercises dealing with the normal development of the child, and the various diseases of infancy and childhood. Special attention is given to sociological, psychological and preventive problems of infancy and childhood. The question of the defective, delinquent and psychopathic child will be discussed. Adolescence and the problems of internal secretion will also be taken up.

First half-year, twice a week.

*64 hours.*

**103. Section Work.** Professor LUCAS and Staff.

Classes are divided into small sections for work in the Out-Patient Department of the University Hospital.

Second half-year.

*Each student 64 hours.*

**FOURTH YEAR**

**103. Section and Ward Work.** Professor LUCAS and Staff.

Classes are divided into small sections for work in the Out-Patient Department and in the wards of the University Hospital or Children's Hospital.

(After 1915-16 this course will not be offered.)

First half-year.

*Each student 96 hours.*

For electives in this department see page 85.



## SURGERY\*

WALLACE I. TERRY, B.S., M.D., Professor of Surgery.  
 HAROLD BRUNN, M.D., Assistant Clinical Professor of Surgery.  
 SAXTON T. POPE, M.D., Instructor in Surgery.  
 HOWARD C. NAFFZIGER, M.S., M.D., Instructor in Surgery.  
 HERBERT S. THOMSON, B.S., M.D., Instructor in Surgery.  
 JEAN PAUL PRATT, A.B., M.D., Instructor in Surgery.  
 DUDLEY TAIT, B.S., M.D., Assistant in Surgery.  
 MARY E. BOTSFORD, M.D., Assistant in Surgery.  
 LOUIS P. HOWE, M.D., Assistant in Surgery.  
 HOWARD E. RUGGLES, A.B., M.D., Assistant in Surgery.  
 CARL L. HOAG, M.S., M.D., Assistant in Surgery.  
 FRANK S. BAXTER, B.S., M.D., Assistant in Surgery.  
 THORNTON STEARNS, A.B., M.D., Assistant in Surgery.  
 EDNA L. BARNEY, M.S., M.D., Voluntary Assistant in Surgery.

Instruction in surgery begins in the second half of the second year. It is aimed to give the student a broad view of the subject, to instill principles of surgical technic and to establish a foundation by means of a course in surgical pathology. The work of this semester is confined to the University Hospital and Out-Patient Department.

Instruction is carried through the third year and the first half of the fourth year. Material for these years is drawn from the University Hospital, the Out-Patient Department, and the San Francisco Hospital.

The work of the second half of the fourth year is elective.

## SECOND YEAR

## 101. Elementary Surgery. Lectures, Demonstrations and Recitations.

Professor TERRY.

A course of lectures, recitations and demonstrations covering the principles of surgery. Asepsis, antisepsis, the process of repair, surgical infections, thrombosis and embolism, wounds and tumors will be among the subjects discussed. These subjects will be illustrated when possible by patients.

Second half-year, twice a week.

32 hours.

## 102. Surgical Technic.

Dr. POPE.

A practical course in the use of instruments, suture materials and surgical appliances, with particular reference to the development of an aseptic technic.

Second half-year, once a week.

16 hours.

\* The Department of Surgery includes Orthopedic Surgery, Urology, Laryngology, Ophthalmology and Roentgenology.

**103. Surgical Pathology.**

**Dr. PRATT.**

A lecture and laboratory course in the study of tissue growth and repair, inflammation and tumors.

Second half-year, twice a week.

*64 hours.*

**104. Section Work.**

**Drs. POPE and THOMSON.**

This course will be given in the Out-Patient Department and in the wards of the University Hospital and will include practical instruction in the diagnosis of minor surgical conditions, history taking, bandaging, the dressing of wounds and the technic of minor operations.

Second half-year.

*Each student 32 hours.*

**THIRD YEAR**

**105A-105B. Surgical Lectures, Demonstrations and Recitations.**

**Professor TERRY.**

A systematic course covering general, special, regional and operative surgery. Clinical material will be utilized as much as possible to illustrate the lectures.

First and second half-years, twice a week.

*64 hours.*

**106A. Clinical Demonstrations.**

**Assistant Professor BRUNN.**

A conference course in which selected cases will be brought before the class and the etiology, diagnosis, prognosis, pathology and treatment discussed. These cases will be presented by students who have previously studied them.

Second half-year (S. F. H.), once a week

*16 hours.*

**107. Surgical Physiology.**

**Dr. POPE**

Lectures and demonstrations in the physiology of respiration and circulation as related to surgery, the study of shock and the effects of anesthetics.

Second half-year, once a week.

*16 hours.*

**108A-108B. Surgical Recitations.**

**Drs. POPE and NAFFZIGER.**

A systematic course based in part on the work given in course 105A-105B.

First and second half-years, once a week.

*32 hours.*

**109. Neurological Surgery.**

Dr. NAFFZIGER.

A lecture and demonstration course having special reference to the physiology and the surgical diagnosis of diseases of the nervous system. The surgical treatment will be briefly considered.

First half-year, once a week.

16 hours.

**110A-110B. Section Work.**

Assistant Professor BRUNN and Drs. NAFFZIGER, THOMSON, PRATT and HOWE.

The class will be divided into sections for work at the University Hospital and San Francisco Hospital.

First half-year (U. C. H.).

Each student 64 hours.

Second half-year (S. F. H.).

Each student 48 hours.

**FOURTH YEAR****111. Surgical Lectures, Demonstrations and Recreations.**

Professor TERRY.

A continuation of course 105A-105B.

First half-year, twice a week.

32 hours.

**106B. Clinical Demonstrations.**

Assistant Professor BRUNN.

A continuation of Course 106A.

First half-year (S. F. H.), twice a week.

32 hours.

**112. Surgical Section Work.**

Assistant Professor BRUNN and Drs. NAFFZIGER and HOWE.

Part of the work in this course will be in the wards where cases will be assigned for study and conference discussion. If the cases be operative the students will assist at the operations and follow the after-treatment.

First half-year (S. F. H.).

Each student, 48 hours.

**113. Surgical Wards.**

Dr. STEARNS.

Cases will be assigned to students, who will write histories, make physical examinations and do the necessary laboratory work. The students will assist in operations which may be performed on these patients and will follow the after-treatment. The administration of anesthetics will also be permitted under supervision. In other words, the students will act as ward clerks.

First half-year (U. C. H.).

Each student, 64 hours.

**114. Roentgenology.**

**Dr. RUGGLES.**

This course covers a general outline of radiology and radiotherapy and will be made as practical as possible.

First half-year (U. C. H.), once a week. *16 hours.*

For electives in this department see pages 85 and 87.

**ORTHOPEDIC SURGERY**

**WALTER I. BALDWIN, B.S., M.D.,** Instructor in Orthopedic Surgery.

**CARL C. CRANE, M.D.,** Assistant in Orthopedic Surgery.

**HOWARD H. MARKEL, A.B., M.D.,** Assistant in Orthopedic Surgery.

The courses in this department will be given in the first half of the fourth year. Instruction consists of lectures, clinical demonstrations and section work in the wards and Out-Patient Department of the University Hospital.

**101. Lectures and Clinical Demonstrations.**

**Dr. BALDWIN.**

In general this course is planned to cover the more common deformities consequent to bone, joint, nerve and congenital lesions, with the laws governing their development. At this time also is considered the mechanical problems involved in the prevention and cure of deformity.

First half-year, once a week. *16 hours.*

**102. Section Work.**

**Drs. BALDWIN, CRANE, and MARKEL.**

First half-year (U. C. H.). *Each student, 32 hours.*

For electives in this department see page 86.

**LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY**

**ALBERT J. HOUSTON, B.L., M.D.,** Assistant Clinical Professor of Laryngology, Otology and Rhinology.

**FREDERICK C. LEWITT, B.S., M.D.,** Assistant in Laryngology, Otology and Rhinology.

**ABEL W. JOHNSON, A.M., M.D.,** Assistant in Laryngology, Otology and Rhinology.

**HANS B. CHRISTIANSEN, M.D.,** Voluntary Assistant in Laryngology, Otology and Rhinology.

**JEROME B. THOMAS, A.B., M.D.,** Voluntary Assistant in Laryngology, Otology and Rhinology.

The required work of this department is given in the third year and in the first half of the fourth year. The major portion of this work is practical and is carried on in association with regular recitations in the Out-Patient Department of the University Hospital. The use of the various instruments is also taught.

The work in the second half of the fourth year is elective.

### THIRD YEAR

#### 101. Clinical Lectures.

Assistant Professor HOUSTON.

This course is given in conjunction with the clinical work in the Out-Patient Department. Its purpose is to cover the subject systematically, in order to give continuity to the clinical work.

Second half-year (U. C. H.), once a week.

16 hours.

#### 102A-102B. Section Work.

Assistant Professor HOUSTON and Drs. JOHNSON, CHRISTIANSEN and THOMAS.

The class is divided into sections for work in the Out-Patient Department.

First and second half-years.

Each student, 56 hours.

### FOURTH YEAR

#### 103. Section Work.

Assistant Professor HOUSTON and Drs. JOHNSON, CHRISTIANSEN and THOMAS.

After 1915-16 this work will be completed in the third year.

First half-year.

Each student, 32 hours.

For electives in this department see page 86.

### OPHTHALMOLOGY

WILLIAM F. BLAKE, A.B., M.D., Instructor in Ophthalmology.

WALTER SCOTT FRANKLIN, M.D., Instructor in Ophthalmology.

EDGAR W. ALEXANDER, B.S., M.D., Instructor in Ophthalmology.

EDWARD F. GLASER, M.D., Assistant in Ophthalmology.

ROY H. PARKINSON, M.D., Voluntary Assistant in Ophthalmology.

It is aimed to acquaint the student with the use of the ophthalmoscope in his second year in the Medical School. This is followed, in the third year, by systematic lectures and recitations covering the more common diseases of the lids and globes. Section work in the Out-Patient Department, with especial attention to differential diagnosis, is given in the third year. In the fourth year work in this department is elective.

**SECOND YEAR**

**101. Ophthalmoscopy.**

**Dr. ALEXANDER.**

A preparatory course intended to teach the use of the ophthalmoscope  
Second half-year, once a week. 16 hours.

**THIRD YEAR**

**102A-102B. Lectures and Recitations.**

**Dr. BLAKE.**

A systematic course of lectures and recitations covering the more  
common diseases of the lids and globes.

First and second half-years, once a week. 32 hours.

**103. Section Work.** **Drs. BLAKE, ALEXANDER, GLASER, and PARKINSON.**

The class will be divided into sections for work in the Out-Patient  
Department.

First half-year. Each student, 32 hours.

For electives in this department see page 86.

**UROLOGY**

**FRANK HINMAN, A.B., M. D.,** Instructor in Urology.

**W. P. WILLARD, M.D.,** Instructor in Urology.

**J. V. LEONARD, M.D.,** Assistant in Urology.

Instruction in this department is given to third and fourth-year students. Advanced work is elective in the second half of the fourth year. The required courses include lectures and recitations, operative and clinical demonstrations and practical work in the Out-Patient Department.

**THIRD YEAR**

**101. Lectures and Recitations in Urology.**

**Dr. HINMAN.**

This course deals with the anatomy, physiology and pathology of the  
Genito-Urinary Tract.

Second half-year, once a week. 16 hours.

**FOURTH YEAR**

**102. Genito-Urinary Clinic.**

**Dr. HINMAN.**

This course will give practical demonstrations of the operative and  
clinical material of the Hospital and Dispensary.

First half-year, once a week. 16 hours.

**103. Section work.**

**Drs. WILLARD and LEONARD.**

Students serve as assistants in the Out-Patient Department.

First half-year. Each student, 32 hours.

For electives in this department see page 86.

## OBSTETRICS AND GYNECOLOGY

FRANK W. LYNCH, A.B., M.D., Professor of Obstetrics and Gynecology.

J. CRAIG NEEL, Ph.B., M.D., Instructor in Obstetrics and Gynecology.

WILLIAM G. MOORE, M.D., Instructor in Gynecology.

LOUIS I. BREITSTEIN, B.S., M.D., Instructor in Obstetrics.

EDWARD TOPHAM, M.D., Assistant in Obstetrics.

L. A. EMGE, M.D., Assistant in Obstetrics and Gynecology.

Instruction in this department is given to second, third and fourth year students. The work of the second and third year is obligatory; that of the fourth year is elective. The required courses include lectures, recitations, laboratory demonstrations, and practical work in the wards and Out-Patient Department.

In general the required work is divided into three parts. The work of the second year is introductory. During the first half of the third year instruction is given in the normal anatomy and physiology of the female generative organs, including normal pregnancy, labor and the puerperium. During the second half-year the courses deal on the one hand with obstetrical complications, and on the other hand with gynecological diseases. This logical arrangement may be strictly adhered to, for the instruction in both gynecology and obstetrics is given by the same department; and there results an elimination of much repetition and an economic use of the student's time.

The Woman's Clinic of the University Hospital which includes both obstetrical and gynecological patients offers a similar opportunity to combine clinical instruction in these subjects and demonstrates the close relationship between them, illustrated by conditions such as sterility, malpositions of the uterus, extra-uterine pregnancy, the injuries due to childbirth, etc.

The clinical opportunities afforded in the wards and dispensary of the University Hospital are supplemented by an Obstetrical and Gynecological service at the San Francisco Hospital which are under the supervision of members of this Department. The latter material is utilized in connection with the elective work offered fourth year students.

## SECOND YEAR

101. **Introductory Lectures.**

Professor LYNCH.

The work of this course is introductory to all of the courses which follow.

Second half-year, once a week.

16 hours.

THIRD YEAR

102. **Lectures and Recitations in Obstetrics.** Professor LYNCH.

This course deals with menstruation, ovulation, the physiology of pregnancy, the mechanism of labor, and the phenomena of the lying-in period.

First half-year, twice a week. 64 hours.

103. **Gynecological Pathology.** \_\_\_\_\_.

Students are supplied a series of slides illustrating the microscopic appearance of (1) the normal genitalia, (2) the anatomical changes which take place during pregnancy, and (3) the pathological lesions of the vagina, uterus, tubes and ovaries. The demonstration of these specimens is preceded by a short talk on the topic of the day's study, which is illustrated with the projectoscope.

First half-year, once a week. 32 hours.

104. **Ward Classes.** Professor LYNCH and Dr. EMGE.

Practical instruction in abdominal palpation, pelvimetry, the care of puerperal women, and of the newborn infant.

First half-year, twice a week. 32 hours.

105. **Pathology of Pregnancy, etc.** Professor LYNCH.

Complications of the reproductive process are reviewed systematically in a series of recitations based upon a standard text-book and illustrated by the experience of the University Clinic.

Second half-year, twice a week. 32 hours.

106. **Operations with the Manikin.** \_\_\_\_\_.

Students are taught the use of the forceps and the technique of other procedures in operative obstetrics.

Second half-year, once a week. 32 hours.

107. **Lectures and Recitations in Gynecology.** Professor LYNCH.

While based upon a standard gynecological text-book this course singles out for emphasis the subjects which have not been considered in the preceding courses. The clinical manifestations, diagnosis and treatment of gynecological diseases are considered more particularly, for the student has already become acquainted with their pathology. (Course 102.)

Second half-year, three times a week. 48 hours.



**108. Practical Instruction.****THE STAFF.**

Instruction is given in the technique of obstetrical and gynecological examinations. Each student must attend at least ten cases of confinement. Clinical instruction in gynecology is given in the wards and dispensary and students may witness gynecological operations both at the University Hospital and the San Francisco Hospital.

Students individually throughout the year.

**FOURTH YEAR****109. Section Work in Gynecology.****THE STAFF.**

Students serve as assistants in the Out-Patient Department.

First half-year.

*Each student 32 hours.*

For electives in this department see page 87.

#### FOURTH-YEAR ELECTIVES

For the session of 1915-16 the last half of the fourth year has been set aside for electives. *A minimum of 560 hours is demanded.* Electives are arranged as double-courses and single-courses. A *double course* occupies the entire day for one month or forenoons or afternoons for two months, and has a value of 140 hours. A *single-course* occupies a half day for one month and has a value of 70 hours.

Students wishing to specialize in any major branch of medical study may elect more than one of the courses offered in a given subject, but no student will be allowed to devote his whole elective period to one subject without special permission of the Advisory Board of the Faculty and the consent of the head of the department concerned.

Students electing research work which necessarily is prolonged beyond the time designated for that subject, will be permitted to finish it provided the time required does not extend beyond the half-year. The permission of the Advisory Board of the Faculty will be necessary to carry out this arrangement.

The final choice of electives must be left at the Secretary's office on or before December 1, 1915. No changes will be allowed after the final arrangement is made. The time allotted for electives, together with the schedule thereof, must be determined by the Secretary of the Faculty, and the Faculty reserves the right to make any changes deemed necessary in the selection and arrangement of the courses chosen by the student.

Examinations will be held at the end of each course, for the most part practical, and the grade assigned to each student will be sent to the Secretary's office as soon as the course has terminated.

The value of the courses, as stated above, when elected in anatomy, physiology, pathology and bacteriology, or research medicine, must depend on arrangement with the heads of the departments concerned.

#### ANATOMY

##### 109. *Anatomy for Physicians and Advanced Students.*

Professor EVANS and Associate Professor MOODY.

*Hours to be arranged.*

##### 210. *Original Investigation.*

Professor EVANS and other members of the staff.

Students and others who are prepared to undertake research in any of the anatomical sciences will be given facilities and encouragement by members of the staff. Time devoted by the majority of the second year class to Course 108 can be applied here by those specially qualified.

*Hours optional.*

**211. Seminar.**

Topics will be discussed by the staff and those electing the course.  
For the year 1915-16 topics will be chosen from the field of human  
and comparative embryology.

*Hours to be arranged.*

**PHYSIOLOGY****210. Experimental Biology.**

Dr. WULZEN.

Special problems in cell physiology and the tropisms.

*Hours to be arranged*

**211A. Advanced Physiology.**

Associate Professor MAXWELL.

Some simple piece of research is repeated and extended in connection  
with a study of the original literature on the subject.

**211B. Advanced Chemical Biology.**

Associate Professor ROBERTSON.

Special topics may be selected by the student in conference with the  
professor as subjects of advanced and intensive study.

**212. Research in Physiology.**

Associate Professor MAXWELL.

Hours and subjects to be arranged.

**213. Research work in Physiological Chemistry.**

Associate Professor ROBERTSON.

Open to students who have the necessary training. The subject of  
the research and the time to be devoted to it to be arranged in  
conference with Professor Robertson.

**PATHOLOGY AND BACTERIOLOGY****201. Research. Problems of Infection and Immunity.**

Professor GAY.

*Hours to be arranged.*

**202. Research. Neuropathology.**

Associate Professor RUSK.

*Hours to be arranged.*

**203. Research. Bacteriology and Protozoology.**

Assistant Professor HALL.

The investigation of concrete problems suggested by the work in  
medical bacteriology.

*Hours to be arranged.*

**204. Advanced Morbid Anatomy and Histopathology.**

Assistant Professor COOKE.

An elective course for fourth year and graduate students in medicine, comprising autopsy technic and the working up of tissues and cultures resulting from post-mortem examination. University Hospital.  
*Hours to be arranged.*

**205. Seminar in Pathology.**

The STAFF.

Reports and discussions of current advances and individual research in the field covered by the department. Open to Medical Students and Graduate Students.

Throughout the year, beginning September 2. Alternate Th, 8 P.M.  
*No credit.*

**206. Experimental Pathology.**

Associate Professor RUSK and Dr. REHFISCH.

An elective course to which a limited number (not over six) especially qualified students will be admitted. Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alteration will be undertaken and the results demonstrated to those in Pathology 103, which latter course it is intended to supplement. Special problems may also be undertaken. This course may also be taken as a graduate course by special arrangement.

**MEDICINE**

**201. Clinical Medicine (U. C. H.).**

Opportunity will be offered three students in the Out-Patient Department and three in the wards of the University Hospital to serve as clinical clerks. This work will be under the supervision of the head of the department and will include such advanced laboratory studies of the patients as are necessary.

Double course, limited to 6 students.

**202. Clinical Medicine (S. F. H.).**

Students will act as clinical clerks in the wards of the San Francisco Hospital. This work will be under the supervision of a member of the department and will include such laboratory studies of the patients as are necessary.

Single or double course.

**203. Tuberculosis.**

This course will comprise individual teaching in the taking of histories, the correlation of symptomatology and physical signs, the differential diagnosis of pulmonary tuberculosis by means of physical examination, radiograms, and special laboratory technic. The treatment of tuberculosis and its complications will be considered with special reference to the modern development of specific therapy. The broader view of tuberculosis in reference to its economic and sociologic aspects will be given emphasis. This course will be offered in the Tuberculosis wards of the San Francisco Hospital by Assistant Professor EVANS and Dr. ROSENCRANTZ. Students will also be instructed in special laboratory examinations of sputum, blood, exudates, etc., in connection with the clinical material of the wards.

Single or double course.

**204. Research in Clinical Medicine.**

Through the coöperation of the STAFF OF THE HOOPER FOUNDATION opportunity will be offered to two or three students to work on some research problem connected with the material of the medical wards.

Double course, limited to 3 students.

**205. Studies in Cardiac Pathology.**

Under direction of Assistant Professor ALLEN, this course will take up the study of the heart by means of the newer graphic methods. Opportunity will be afforded the student to study the use of the polygraph and the electro-cardiograph. Particular stress will be laid upon the interpretation of records from these instruments.

*Time to be arranged.*

**NEUROLOGY****201. Neurology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

## DERMATOLOGY

### 201. *Dermatology.*

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants. Opportunity is also afforded for the preparation and examination of biopsies and for the study of the bacteriology of the skin.

Single or double course.

## PEDIATRICS

### 201. *Pediatrics.*

An elective course in pediatrics will be open to fourth-year men in the wards and the Out-Patient Department of the University Hospital. This course will consist of individual case teaching in which students will be expected to do all the work in connection with the patients assigned to them. This will include following the case daily, doing all the laboratory work necessary, and looking up literature as far as available. There will be ward talks and demonstrations in the laboratory. Case histories will be taken up to cover conditions which are important and which are not found in the wards during the time the course is in progress. If the time is available special problems will be assigned students electing a double course.

Single or double course.

## SURGERY

### 201. *Surgery (U. C. H.).*

The students will act as clinical clerks in the wards and Out-Patient Department of the University Hospital. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited.

Single or double course.

### 202. *Surgery (S. F. H.).*

The students will act as clinical clerks in the wards of the San Francisco Hospital. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited.

Single or double course.

**203. Surgery.**

The students will devote their time to research in surgical physiology and pathology and to work in surgery of the peripheral and central nervous system. Operative surgery on the cadaver may also be included in this course.

Single or double course.

**204. Surgical Pathology.**

A research course in subjects to be assigned under direction of Dr. PRATT.

Single course.

**ORTHOPEDIC SURGERY****201. Orthopedic Surgery.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**UROLOGY****201. Urology.**

This course consists of an advanced study of kidney diseases, including renal diagnosis and functional tests. Students also serve as assistants in the Out-Patient Department, particular attention being paid to cystoscopy and ureteral catheterization.

Single or double course.

**202. Research in Urology.**

*Hours and subjects to be arranged.*

**OPHTHALMOLOGY****201. Ophthalmology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY****201. Laryngology, Otology and Rhinology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

ROENTGENOLOGY

201. **Roentgenology.**

Students will be assigned to assist in technical work under direction of Dr. RUGGLES.

Single or double course.

OBSTETRICS AND GYNECOLOGY

201. **Obstetrics and Gynecology.**

A practical course including work in the Out-Patient Department, the wards, and the operating-room. Students will act as clinical clerks in the wards and as assistants in the operating room. The course is given in part at the San Francisco Hospital.

Single or double course.





## **SCHEDULES AND LIST OF STUDENTS**



**SCHEDULES, 1915-16**

**FIRST YEAR**  
*First Semester*

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-11	HISTOLOGY <i>Evans</i>	ANATOMY <i>Moody Smith</i>	HISTOLOGY <i>Evans</i>	ANATOMY <i>Moody Smith</i>	HISTOLOGY <i>Evans</i>	ANATOMY <i>Moody Smith</i>
11-12						
1-5	ANATOMY <i>Moody Smith</i>	ANATOMY <i>Moody Smith</i>	ANATOMY <i>Moody Smith</i>	ANATOMY <i>Moody Smith</i>	ANATOMY <i>Moody Smith</i>	

**FIRST YEAR**  
*Second Semester*

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9					NEUROLOGY LECTURE <i>Corner</i>	
9-10	PHYSIOLOGY LABORATORY	PHYSIOLOGY LABORATORY	PHYSIOLOGY LABORATORY	PHYSIOLOGY LABORATORY	BIOCHEMISTRY LECTURE <i>Robertson</i>	PHYSIOLOGY LABORATORY
10-11					PHYSIOLOGY LECTURES <i>Maxwell Burnett</i>	
11-12	PHYSIOLOGY LECTURES <i>Maxwell Burnett</i>	PHYSIOLOGY LECTURES <i>Maxwell Burnett</i>	PHYSIOLOGY LECTURES <i>Maxwell Burnett</i>	PHYSIOLOGY LECTURES <i>Maxwell Burnett</i>		PHYSIOLOGY LECTURES <i>Maxwell Burnett</i>
1-2	BIOCHEMISTRY LECTURES <i>Robertson</i>	BIOCHEMISTRY LECTURES <i>Robertson</i>	BIOCHEMISTRY LECTURES <i>Robertson</i>	BIOCHEMISTRY LECTURES <i>Robertson</i>		
2-5	BIOCHEMISTRY LABORATORY	BIOCHEMISTRY LABORATORY	BIOCHEMISTRY LABORATORY	BIOCHEMISTRY LABORATORY	NEUROLOGY LABORATORY <i>Corner</i>	



SECOND YEAR  
Second Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9						SURGICAL TECHNIC <i>Pope</i>
9-10	DERMATOLOGY <i>Marrow</i>	ELEMENTARY SURGERY <i>Terry</i>	OPHTHALMOSCOPY <i>Alexander</i>	ELEMENTARY SURGERY <i>Terry</i>		NEUROLOGY <i>Lennox</i>
10-11			SECTION WORK		PHARMACOLOGY <i>Robertson</i> Berkeley	HYGIENE & PREVENTIVE MEDICINE <i>Sawyer</i>
11-12	SECTION WORK	SECTION WORK	MEDICINE <i>Moffitt</i>	SECTION WORK		OBSTETRICS <i>Lynch</i>
12-1	CLINICAL PHYSIOLOGY <i>Moffitt</i> Atigore	PEDIATRICS <i>Lucas</i>	CLINICAL PHYSIOLOGY <i>Moffitt</i> Atigore	MEDICINE <i>Moffitt</i>		
2-4	SURGICAL PATHOLOGY <i>Pratt</i>	CLINICAL PATHOLOGY <i>Falconer</i>	SURGICAL PATHOLOGY <i>Pratt</i>	CLINICAL PATHOLOGY <i>Falconer</i>	PHARMACOLOGY <i>Robertson</i> Berkeley	
4-5	MATERIA MEDICA <i>Schneider</i>		MATERIA MEDICA <i>Schneider</i>			
5-6	HOMOEOPATHIC MATERIA MEDICA (ELECTIVE)		HOMOEOPATHIC MATERIA MEDICA (ELECTIVE)			



# THIRD YEAR

Second Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	NEUROLOGY CLINICAL LECTURES <i>Lennon</i>	MEDICINE DEMONSTRATIONS S.T. Hospital <i>Kerr</i>	SURGERY LECTURES DEMONSTRATIONS <i>Terry</i>	MEDICINE LECTURES DEMONSTRATIONS S.T. Hospital <i>Kerr</i>	SURGERY LECTURES DEMONSTRATIONS <i>Page</i> <i>Naffziger</i>	SURGERY LECTURES DEMONSTRATIONS <i>Terry</i>
9-10	MEDICINE CLINICAL LECTURES <i>Moffitt</i>	SURGERY DEMONSTRATIONS S.T. Hospital <i>Brown</i>	DERMATOLOGY CLINICAL LECTURES <i>Morrow</i>	MEDICINE CLINICAL DEMONSTRATIONS S.T. Hospital <i>Farber</i>	SYPHILIS LECTURES DEMONSTRATIONS <i>Schmitt</i>	SECTION WORK
10-11					OPHTHALMOLOGY CLINICAL LECTURES <i>Blake</i>	
11-12	SECTION WORK	SECTION WORK	SECTION WORK	SECTION WORK	MEDICINE CLINICAL LECTURES <i>Moffitt</i>	PSYCHIATRY <i>Richards</i>
12-1					SURGICAL PHYSIOLOGY <i>Page</i>	UROLOGY LECTURES DEMONSTRATIONS <i>Hinman</i>
2-3	OBSTETRICS <i>Lynch</i>	THERAPEUTICS <i>Hilgare</i>	OBSTETRICS <i>Lynch</i>	THERAPEUTICS <i>Hilgare</i>	OBSTETRICS <i>Lynch</i>	
3-4	GYNECOLOGY	GYNECOLOGY		GYNECOLOGY		
4-5		PATHOLOGICAL DEMONSTRATIONS <i>Cooke</i>	FORENSIC MEDICINE		PATHOLOGICAL DEMONSTRATIONS <i>Cooke</i>	

### THIRD YEAR *First Semester*

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	NEUROLOGY CLINICAL LECTURES <i>Lennon</i>		SVAGERY LECTURES DEMONSTRATIONS <i>Terry</i>	NEUROLOGICAL SURGERY <i>Naffziger</i>	SURGERY RECTIONS <i>Pope</i> <i>Naffziger</i>	SURGERY LECTURES DEMONSTRATIONS <i>Terry</i>
9-10	MEDICINE CLINICAL LECTURES <i>Moffitt</i>	LARYNGOLOGY CLINICAL LECTURES <i>Houslon</i>	DERMATOLOGY CLINICAL LECTURES <i>Morrow</i>	THERAPEUTICS <i>Higore</i>	MEDICINE CLINICAL LECTURES <i>Moffitt</i>	OPHTHALMOLOGY CLINICAL LECTURES <i>Blake</i>
10-11						HYGIENE & PREVENTIVE MEDICINE <i>Sawyer</i>
11-12	SECTION WORK	SECTION WORK	SECTION WORK	SECTION WORK	SECTION WORK	PSYCHIATRY <i>Fedotatz</i>
12-1						OBSTETRICS <i>Lynch</i>
2-4	GYNECOLOGY	PEDIATRICS <i>Lucas</i>	OBSTETRICS <i>Lynch</i>	PEDIATRICS <i>Lucas</i>	OBSTETRICS <i>Lynch</i>	
4-5	INTERIA MEDICA <i>Schneider</i>	PATHOLOGICAL DEMONSTRATIONS <i>Cooke</i>	FORENSIC MEDICINE	OBSTETRICS <i>Lynch</i>	PATHOLOGICAL DEMONSTRATIONS <i>Cooke</i>	

## FOURTH YEAR

First Semester

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9		MEDICINE LECTURES DEMONSTRATIONS S.T. Hospital <i>Herr</i>	SURGERY LECTURES DEMONSTRATIONS <i>Terry</i>	MEDICINE LECTURES DEMONSTRATIONS S.T. Hospital <i>Herr</i>		SURGERY LECTURES DEMONSTRATIONS <i>Terry</i>
9-10	ORTHOPEDIC SURGERY LECTURES & DEMONSTRATIONS <i>Baldwin</i>	SURGERY CLINICAL DEMONSTRATIONS S.T. Hospital <i>Brunn</i>	UROLOGY CLINICAL DEMONSTRATIONS <i>Hinman</i>	SURGERY CLINICAL DEMONSTRATIONS S.T. Hospital <i>Brunn</i>	ROENTGENOLOGY <i>Ruggles</i>	
10-11						
11-12	SECTION WORK	SECTION WORK S.T. Hospital	SECTION WORK	SECTION WORK S.T. Hospital	SECTION WORK	
12-1						
2-4	WARD WORK	WARD WORK	WARD WORK	WARD WORK	WARD WORK	
4-5						

DEGREES GRANTED MAY, 1915

Irvin H. Betts, B.S. ....	Salinas
University Hospital, San Francisco.	
Gordon Adams Clapp, A.B. ....	Forest Grove, Ore.
San Francisco Hospital, San Francisco.	
Abelson Epstein ....	San Francisco
San Francisco Hospital, San Francisco.	
Aaron Friedman ....	San Francisco
San Francisco Hospital, San Francisco.	
Clain Fanning Gelston, B.S., M.S. ....	Hamilton
University Hospital, San Francisco.	
Henry Leopold Holzberg, B.S., M.S. ....	San Francisco
San Francisco Hospital, San Francisco.	
George Arneke Kretsinger, B.S. ....	Hayward
San Francisco Hospital, San Francisco.	
Fred Herman Kruse, B.S. ....	Tulare
University Hospital, San Francisco.	
Alice Freeland Maxwell, B.S. ....	San Francisco
University Hospital, San Francisco.	
John Morse Rebfish ....	San Francisco
1940 Scott Street, San Francisco.	
Fred Nicholas Scatena, B.S. ....	San Francisco
888 Union Street, San Francisco.	
Homer Carlton Seaver, A.B. ....	Pomona
University Hospital, San Francisco.	
Clarence Edgar Wells, B.S., M.S. ....	Visalia
University Hospital, San Francisco.	
John Homer Woolsey, B.S., M.S. ....	Oakland
University Hospital, San Francisco.	

STUDENTS, SESSION 1914-1915

FOURTH CLASS

Irvin H. Betts ....	Salinas
335 Lincoln Way, San Francisco.	
Gordon Adams Clapp ....	Forest Grove, Ore.
1216 Third Avenue, San Francisco.	
Abelson Epstein ....	San Francisco
712 Hayes Street, San Francisco.	
Aaron Friedman ....	San Francisco
3468 Seventeenth Street, San Francisco.	
Clain Fanning Gelston ....	Hamilton
1420 Fifth Avenue, San Francisco.	

Henry Leopold Holzberg, B.S., M.S. ....	San Francisco
1631 Geary Street, San Francisco.	
George Arneke Kretsinger, B.S. ....	Hayward
1216 Third Avenue, San Francisco.	
Fred Herman Kruse, B.S. ....	Tulare
1356 Third Avenue, San Francisco.	
Alice Freeland Maxwell, B.S. ....	San Francisco
1241 Third Avenue, San Francisco.	
John Morse Rehfish ....	San Francisco
1940 Scott Street, San Francisco.	
Homer Carlton Seaver, A.B. ....	Pomona
335 Lincoln Way, San Francisco.	
Clarence Edgar Wells, B.S., M.S. ....	Visalia
1252 First Avenue, San Francisco.	
John Homer Woolsey, B.S., M.S. ....	Oakland
5677 Ocean View, Oakland.	

## THIRD CLASS

Mabel Florence Arrington, B.S. ....	East Northfield, Mass.
1252 First Avenue, San Francisco.	
Elizabeth Worley Bailey, B.S. ....	Berkeley
1248 First Avenue, San Francisco.	
Leonard W. Buck, B.S., M.S. ....	Vacaville
1431 Fifth Avenue, San Francisco.	
William Edward Chamberlain, B.S. ....	Oakland
2938 Webster Street, Oakland.	
Elton Ralph Charvoz, B.S. ....	Santa Maria
San Anselmo.	
Enos Paul Cook, B.S. ....	Oakland
1251 Second Avenue, San Francisco.	
Dunleigh Corey, B.S. ....	La Jolla
1251 Second Avenue, San Francisco.	
Mary Craig, B.S. ....	Upland
1212 First Avenue, San Francisco.	
Brython Parry Davis, B.S. ....	Weaverville
1277 First Avenue, San Francisco.	
Thomas Balfour Mackie Dunn, B.S. ....	Santa Cruz
1251 Second Avenue, San Francisco.	
Orville Roscoe Goss, B.S. ....	Berkeley
1233 First Avenue, San Francisco.	
Harold Pitman Hare, B.S. ....	Fresno
1251 Second Avenue, San Francisco.	
George Stevenson Holeman, A.B. ....	Riverside
1911 Page Street, San Francisco.	
Charles Daniel Holliger, B.S., M.S. ....	Indianapolis
458 Frederick Street, San Francisco.	

Warren Douglas Horner, B.S. ....	Chico
1251 Second Avenue, San Francisco.	
Maurice Jones, B.S. ....	Ione
1251 Second Avenue, San Francisco.	
Frederick George Linde, B.S. ....	Auburn
1277 First Avenue, San Francisco.	
Charles Pierre Louis Mathe ....	San Francisco
3367 Twenty-sixth Street, San Francisco.	
Laird Monterey Morris ....	Berkeley
2229 Vine Street, Berkeley.	
Myrl Morris, B.S. ....	Berkeley
2229 Vine Street, Berkeley.	
Robert Reid Newell ....	Stockton
1457 Tenth Avenue, San Francisco.	
Joseph Allen Owen, B.S. ....	Red Bluff
1420 Fifth Avenue, San Francisco.	
Frank William Pinger ....	Berkeley
1251 Second Avenue, San Francisco.	
John Carroll Ruddock, B.S., M.S. ....	Ukiah
1277 First Avenue, San Francisco.	
Margaret Schulze, B.S., M.S. ....	Berkeley
1731 Carlton Street, Berkeley.	
Henry Hunt Searls, B.S. ....	Nevada City
64 Sixth Avenue, San Francisco.	
Julius Sherman ....	San Francisco
1281 Second Avenue, San Francisco.	
Robert Stanton Sherman, B.S., M.S. ....	Berkeley
3367 Twenty-sixth Street, San Francisco.	
William Ben Thompson, A.B., M.S. ....	South Pasadena
1251 Second Avenue, San Francisco.	
Myer Jacob Wahrhaftig ....	Orangevale
1283 Second Avenue, San Francisco.	
Marshall Gould Williamson, B.S. ....	San Francisco
1631 Oak Street, San Francisco.	

## SECOND CLASS

Thomas Fred Ayers, B.S. ....	San Francisco
1006 Page Street, San Francisco.	
Frank Philip Brendel ....	Sacramento
1251 Second Avenue, San Francisco.	
Pini Joseph Calvi ....	San Jose
1116 Clay Street, San Francisco.	
Allan Largess Cohn, B.S. ....	San Francisco
2436 Clay Street, San Francisco.	
Mendel Leopold Cohn, B.S. ....	Placerville
2630 Piedmont Avenue, Berkeley.	

Orrin S. Cook, B.S.	Lodi
128 Edgewood Avenue, San Francisco.	
Charles Alfred Craig	Lakeport
450 Irving Street, San Francisco.	
Jewel Fay, B.L.	Berkeley
1381 Third Avenue, San Francisco.	
Howard Webster Fleming, B.S.	San Jose
1251 Second Avenue, San Francisco.	
William Christensen Frey	Modesto
1275 Third Avenue, San Francisco.	
James Ernest Harvey	Los Angeles
1251 Second Avenue, San Francisco.	
Robert Harold Heaney	San Francisco
4287 Twenty-third Street, San Francisco.	
Mervyn Heller Hirschfeld	San Francisco
731 Duboce Avenue, San Francisco.	
Merill Windsor Hollingsworth, B.S.	Los Angeles
2227 Chapel Street, Berkeley.	
Douglas Roy MacColl, B.S.	Berkeley
2608 Benvenue Avenue, Berkeley.	
Harold Hoagland McCov, B.S.	Beaumont
1281 Second Avenue, San Francisco.	
Emma Mehlmann, B.L.	San Luis Obispo
365 Buena Vista Avenue, San Francisco.	
Hiram Edgar Miller	Elk Grove
128 Edgewood Avenue, San Francisco.	
Vinton Adolf Muller	Nevada City
1420 Fifth Avenue, San Francisco.	
Hugh Elmer Penland, B.S.	Berkeley
2350 Woolsey Street, Berkeley.	
Alma Stevens Pennington, B.S.	San Francisco
2828 Folsom Street, San Francisco.	
Elizabeth Schulze, B.S.	Berkeley
1731 Carlton Street, Berkeley.	
Lewis Seligman	Dinuba
1358 Sixth Avenue, San Francisco.	
Alson Anderson Shufelt	Reno
1414 Rhode Island Street, San Francisco.	
Daniel Warren Sooy	North San Juan
1251 Second Avenue, San Francisco.	
John Chilton Williams, B.S.	Fresno
1980 University Avenue, Berkeley.	
Elmo Russell Zumwalt	Richmond
19 Woodland Avenue, San Francisco.	

## FIRST CLASS

Mary Isabella Armstrong, A.B. ....	Piedmont
112 Bonita Avenue, Piedmont.	
George Henry Beeker .....	San Francisco
1640 Euclid Avenue, Berkeley.	
Thomas Floyd Bell, A.B. ....	Oakland
2741 Roosevelt Avenue, Berkeley.	
Robert Wilson Binkley, A.B., .....	Santa Ana
2325 Dana Street, Berkeley.	
Ruth Burr, A.B. ....	Sacramento
2720 Dwight Way, Berkeley.	
Roy Mack Byram .....	Los Angeles
2700 Bancroft Way, Berkeley.	
Lorin Linwood Caldwell, B.S. ....	San Francisco
2612 Haste Street, Berkeley.	
Florence Josephine Chubb, B.L. ....	Bakersfield
2219 Union Street, Berkeley.	
Frederick Carl Cordes, A.B. ....	Los Angeles
2333 College Avenue, Berkeley.	
Henry Chipman Dodge, A.B. ....	Stockton
2623 College Avenue, Berkeley.	
Charles Louis Freytag, A.B. ....	San Rafael
2461 Durant Avenue, Berkeley.	
Walter Herbert Frolich, A.B. ....	San Francisco
330 Willard Street, San Francisco.	
Cavins Deter Hart, A.B. ....	Colusa
2316 Bowditch Street, Berkeley.	
Mary Ruth Hill, A.B. ....	Carson City, Nev.
2736 Haste Street, Berkeley.	
Harold Homer Hitchcock, A.B. ....	Berkeley
2314 Hilgard Avenue, Berkeley.	
Fred Gooding Holmes, A.B. ....	Berkeley
1513 Walnut Street, Berkeley.	
Nathan Samuel Housman .....	South Bend, Ind.
2218 Dana Street, Berkeley.	
Charles Alfred James, A.B. ....	Fowler
2425 Bancroft Way, Berkeley.	
William Patrick Joseph Lynch .....	Stockton
2528 Ridge Road, Berkeley.	
John Gray McQuarrie .....	Beaver City, Utah
2909 Adeline Street, Berkeley.	
Belle Ellingsen Merrill .....	Oakland
685 Thirty-sixth Street, Oakland.	
Sidney Olsen, A.B. ....	Riverside
2600 Durant Avenue, Berkeley.	



Ralph Rabinowitz, A.B. ....	San Francisco
2318 Bancroft Way, Berkeley.	
Alverda Elva Reische .....	Meridian
2420 College Avenue, Berkeley.	
Homer Righetti, A.B. ....	San Francisco
305 Walnut Street, San Francisco.	
Sidney Kinlock Rosenthal .....	Berkeley
2307 Hearst Avenue, Berkeley.	
Frederick Paxton Shafer, A.B. ....	El Centro
2521 Durant Avenue, Berkeley.	
William Dan Sink, A.B. ....	Oakland
829 East Nineteenth Street, Oakland.	
William Otto Solomon, A.B. ....	Eureka
2332 Fulton Street, Berkeley.	
Paul Herman Streichan, A.B. ....	Vallejo
2334 Durant Avenue, Berkeley.	
Laurence Taussig, A.B. ....	San Francisco
2336 College Avenue, Berkeley.	
Fletcher Brandon Taylor, A.B. ....	Pasadena
Plymouth Center, Oakland.	
LeGrand Wodley, A.B. ....	Kanab, Utah
1715 Grant Street, Berkeley.	

#### PARTIAL STUDENTS

Lore Weber, B.L. ....	Berkeley
1515 Euclid Avenue, Berkeley.	

#### SUMMARY

##### CANDIDATES FOR THE DEGREE OF DOCTOR OF MEDICINE

Fourth Class .....	13
Third Class .....	31
Second Class .....	27
First Class .....	33
Partial Students .....	1
	<hr/>
	105

## **GRADUATES**



GRADUATES

1864

D'Amour, Ferdinand  
Davie, Jr., J. C.  
\*DuBois, A. L.  
\*Handy, J. C.  
Pond, W. B.  
\*Stivers, C. A.  
\*Weeks, F. L.  
Welch, W. P.

1865

Drinkhouse, E. J.  
Fahn, C. M.  
Gros, Edward  
Taylor, Edward R.

1866

Barber, Edward T.  
\*Brierly, Conant B.  
Fine, Andrew  
Heavitt, Granville  
Lingo, Marin B.  
\*Plummer, Richard H.  
\*Prevost, J. Renny  
Richardson, J. A.  
\*Rupe, Samuel H.

1867

Cairns, John  
\*Hackett, John  
Hansen, Thomas C.  
\*O'Neill, A. A.  
\*Robinson, Luke  
Shelton, Thomas W.  
Steely, John  
\*Widney, J. P.

1868

Bates, Charles B.  
\*Cameron, James S.  
\*Corbett, S. J.  
\*McGuire, Lucius  
\*Newmark, Valentine  
Waltz, G.

1869

Caldwell, Robert  
Clark, J. J.

\* Deceased.

Cochran, W. A.

Haile, C. S.

\*Toland, Charles A.

\*Tuttle, H. P.

\*Turner, J. T.

Webber, J. C.

Younger, Alex. J.

1870

Briggs, M. W.

Mackenzie, J. H.

Rucker, H. N.

Sage, C. T.

Seawell, John L.

1871

Churchill, Leonard

\*Hampton, James E.

\*Kirkpatrick, C. A.

1872

Keane, George B.

Kurtz, Joseph

\*Lyford, L. Dexter

1873

\*Anderson, J. A.

\*Cox, Thomas H.

Martineaut, E. D.

Mays, William H.

\*O'Neill, J. C.

\*Schnabel, Martin

\*Whittell, A. P.

1874

Biggs, Frederick P.

\*Blake, James W.

\*Delmont, Francois

\*Hicks, Young E.

McDermott, William P.

McLean, Robert A.

Miller, Charles F.

Nottage, George E.

\*Waters, John W.

1875

Agnew, William P.

Allen, Edward O.

- \*Benedict, C. W.
- Calbreath, John F.
- Callaghan, D. T.
- Davidson, Joseph R.
- \*Dawson, Alson
- Harris, Thomas W.
- Kosbue, A. Emil
- Mason, Benjamin F.
- Miller, John A.
- Scheelhous, E. J.
- \*Simon, Jules A.
- Smith, William P.
- Swann, Charles M.

1876

- \*Blake, Charles M.
- \*Brannan, J. J.
- Brown, George J.
- \*Chaigneau, V. A.
- \*Connolly, John J.
- \*Hodgdon, W. H. A.
- \*Hook, Walter E.
- Kirkwood, J. W.
- \*Lindenberger, W. H.
- McCormack, H. F.
- Minor, John F.
- Pope, Horace E.
- Powell, J. M.
- \*Quinlin, Albert P.
- Rorke, James
- Seawell, Thomas W.
- Sichel, Gust. W.
- Smith, T. H.
- \*Summers, G. M.
- Wanzer, L. M. F.

1877

- \*Duncan, S. C.
- Frost, James
- Heinimann, J. M.
- Joshephi, Simon E.
- McColl, G. F.
- McDonald, J. J.
- \*Pescia, Joseph
- \*Reich, George A.
- \*Reynolds, George E.
- Stephenson, B. E.
- Swisher, J. R.
- Von Buelow, F.
- Weiss, E. M.
- Wheaton, S. P.
- Williamson, W. T.

\* Deceased.

1878

- Bradbury, George F.
- Bruns, William C.
- Curran, Mary K.
- \*Guillemard, A. J.
- \*Lewitt, Frank A.
- \*McLaughlin, M. A.
- Osler, Charles
- \*Pruett, J. A.
- Seavey, L. T.
- Shuey, Sarah I.
- Summers, John F.

1879

- Addington, D. M.
- \*Downs, George W.
- \*Foote, Gilbert
- Gale, Herbert A.
- Harmon, Roberdeau
- \*Howell, H. H.
- \*Hughes, Lewis J.
- Johnstone, Arthur.
- Scott, Arthur W.
- Smith, George S.
- Sparks, Agnes
- Voight, W. C.
- Younger, Edward A.

1880

- \*Bettelheim, A. F.
- \*Caldwell, H. H.
- \*Foulkes, J. F.
- Hopkins, T. P.
- Laidlaw, Horace
- Lord, Franklin F.
- Meyers, Robert C.
- Mueller, H. E.
- Pond, Henry M.
- Robertson, John W.
- Sobey, L. A.

1881

- Bates, Walter E.
- Beardsley, E. M.
- Clinton, Charles A.
- Dean, Andrew J.
- DePuy, Anson A.
- Evans, C. W.
- LeFevre, J. P.
- Gillham, G. W.
- \*Grattan, E. L.
- Merritt, Emma L. Sutro

Morgan, F. E.  
Olds, William H.  
Sawyer, H. C.  
\*Sellon, Anna F.  
Sheets, John H.  
Young, Junius D.

1882

Beaumeister, Benjamin H.  
Bromly, R. Innis  
\*Buchard, L. S.  
Matthewson, J. M.  
Merritt, George Washington  
\*Moody, Mary W. F.  
\*Muenter, Henry  
Patterson, T. J.  
Payne, Joseph Richey  
Pressley, John B.  
Reardon, Thomas B.  
\*Senter, E. S.  
\*Stanton, James  
\*Stewart, J. M.  
Tarter, Albert P.

1883

\*Bordé, Henry J.  
Hughes, Jerome A.  
Lonigo, Emile V.  
Lovett, William B.  
\*Lundborg, Gustaf W.  
Mervey, Emile C.  
Patton, Charles J.  
Reed, Clarence E.  
Riley, Jahial S.  
Urban, Kurt  
\*Wickman, William J.

1884

Anderson, Winslow  
Beede, William M. S.  
Buckley, Vincent P.  
Clark, William D.  
Connolly, Thomas E.  
D'Ancona, Arnold A.  
Day, John G.  
Dodge, Henry Washington  
\*Enright, Chas. M.  
Gates, Frank H.  
\*McCoy, Juan W.  
Nuttall, George H. F.  
Partsch, Herman  
Scholl, Albert L.  
\*Sherman, Elenora S.

\* Deceased.

1885

\*Armistead, Howell V.  
Baldwin, Robert O.  
\*Collins, Addison C.  
Gallwey, John  
Howard, Katherine I.  
Lustig, Daniel D.  
Nichols, Theodore A.  
\*Perrault, Edward L.  
Wilcox, Wilbur J.  
Williamson, John M.  
Winton, Henry M.  
Woods, W. E. Josephine  
\*Wooster, David

1886

Brown, Ernest L.  
Chalmers, William P.  
Conlan, William E.  
Kingsley, Thomas H.  
\*Plant, Benjamin A.  
Soboslay, Julius  
Wilson, Kemlo R. McD.

1887

Cluness, Wm. R., Jr.  
Cook, Frank S.  
Fottrell, Michael J.  
Glaze, George I.  
Howard, William B.  
Kirchhoffer, Frederick  
Koboyashi, Sankio  
Mays, Arthur H.  
\*McLean, John T.  
Morrill, Augustus L.  
\*Park, Theorilda C.  
\*Reardon, William E.  
Shannon, James  
Tevis, Henry L.  
Watanabe, Tey  
Williams, Robert B.

1888

Alexander, Monroe E.  
Barbat, John H.  
Cox, Rosamond L.  
\*Dennis, Nathan P.  
\*Dunn, James P. H.  
\*Estes, Melvin B.  
Frick, Euclid B.  
Happersberger, Albert K.  
Kelly, John L.  
Noble, John A.  
White, James T.

1889

- \*Bunker, Robert E.
- \*Foreman, Francesca I.
- Gleaves, Christopher C.
- Greene, Frances R. Marx
- Haskin, William H.
- Holmes, Edward R.
- Jones, Ottowell W.
- Kawakami, Nasayasu
- Mather, Squire R.
- Mayer, Oscar J.
- O'Brien, Aloysius P.
- Oliver, Joseph A.
- Tuggle, Samuel P.
- Wade, Mark S.
- \*Zeyn, Gustav C.

1890

- Bond, Frederick T.
- Felt, Rae
- Hawkins, William J.
- Hunkin, Samuel J.
- \*Kugeler, Henry B. A.
- Mann, Chas. S.
- \*Martinez, John M.
- Meyer, Albert G.
- Mohun, Charles C.
- Scholl, Albert J.
- Spring, Charlotte B.
- Surryhne, Benjamin F.
- Thrasher, Marion

1891

- Baker, Henry Anthony
- Blake, Charles Robert
- Burnham, Clark James
- Collischonn, Philip
- Driscoll, Edward Paul
- Dunbar, Arthur White
- Ford, Campbell
- \*Kirby, William Thomas
- Lagan, Edward
- Macdonald, John Munroe
- McMurdo, John R.
- Milton, Joseph Leo
- Molony, James John
- Morse, Fred Wellington
- Olsen, Marie Colditz
- \*Oviedo, Perfecto
- Petrie, Frank Branson
- \*Sims, John Marion
- Smith, Weston Olin
- Warner, James Kyle
- Wayson, James Thomas

1892

- Caglieri, Guido E.
- Crook, Emma E.
- \*Fraser, S. J.
- Johnstone, Ernest Kinlock
- Lowe, Frederick William
- \*McCone, James F.
- Nelson, John A.
- Ogden, George W.
- Rathbone, William T.
- Sanborn, Franklin H.
- Schram, Lillie Bussenius
- Sutherland, Robert L.
- Terry, Wallace Irving
- Von Adelung, Edward, Jr.

1893

- Aird, John W.
- Berndt, Richard M. H.
- Cadwallader, Rawlins
- Conrad, David Andrew
- Cothran, Abraham L.
- Falck, Millicent E.
- Fleming, Bartholomew Francis
- Flesher, Frederick Charles G.
- Freeman, Ernest Maynard
- Gall, Alexander Marshall
- Glover, Cosmos Andrew
- Horton, Edward Shelton
- Hulse, Clarence H.
- \*Lagan, Hugh
- Maguire, Charles S.
- McCarthy, Charles D.
- Phelan, Henry duR.
- \*Pond, Gardner Perry
- Rantz, Stephen H.
- Sanborn, William K.
- Schrader, Sydney H.
- Simon, Grace

1894

- Booth, John R.
- Bunnell, Edwin
- Clark, George Waverly
- Cleary, Stephen
- Crees, Robert
- De Puy, Edward Spence
- Dickerson, Clarence Fitzhugh
- Fitzgibbon, Frank Timothy
- Freeman, Charles Henry
- Greth, August
- Hill, Edward John
- Holmes, Thomas Blakeman

\* Deceased.

Leland, Thomas B. W.  
 MacInnis, Martin B.  
 McCullough, Frank E.  
 McKnight, Helen M.  
 Morrissey, Joseph Grant  
 Morrison, Mary E.  
 Pawlicki, Casimir F.  
 \*Reith, Fenelon M.  
 Root, Corydon B.  
 Ryfkogel, Henry A. L.  
 Selling, Natalie  
 Sharp, James Graham  
 \*Sime, Neli A.  
 Smith, Harvey F.  
 Stirewalt, Henry W.  
 Thompson, James Goodwin  
 Tiffany, Edward V.  
 Wilkes, Farrington  
 Wright, Henry E.

1895

Bacigalupi, Louis D.  
 Badilla, Jose Crisanto  
 \*Barbat, William Benjamin Frank-  
 lin  
 Boyes, William J. R.  
 Browne, Augustus Frank  
 Dudley, Frank W.  
 Easton, Daniel E. F.  
 \*Emerson, Horatio B.  
 \*Flood, John J.  
 \*Gray, Robert F.  
 \*Hay, William G.  
 \*Heller, Clarence Louis  
 Hopkins, Edward Kimball  
 Hull, James P.  
 Lartigau, August L. J.  
 \*Lutz, Frederick A.  
 MacCallum, Hammond J.  
 \*McCulloch, Thomas A.  
 Nast, John Ernest  
 Philips, Adelina M. Feder  
 Rinne, Frederick A.  
 Sankey, Mary J.  
 Schmelz, Charles J.  
 Sharp, Rose Eppinger  
 \*Trafton, William Augustus  
 Villain, Albert J.  
 Stone, Bertram  
 Helms, George L.  
 Hyde, George E.

\* Deceased.

1896

Allen, Clifford Emmet  
 Anderson, Helen O.  
 \*Armistead, Cecil M.  
 Bancroft, Eleanor May Stow  
 Beck, Henry Martin  
 Blum, Sanford  
 Botsford, Mary Elizabeth  
 Broughton, George Anthony  
 Burnham, William P.  
 Cameron, Howard McD.  
 Chace, William D'Arcy  
 \*Coe, Leonard Hayes  
 Cox, Thomas J.  
 Giannini, Attilio H.  
 Harrigan, Joseph T.  
 Katsuki, Ichitaro  
 Kellogg, Wilfred Harvey  
 \*Kearney, James Frederick  
 \*Lee, Arthur S.  
 Maloon, Clarence LaFayette  
 McGettigan, Charles D.  
 McLaughlin, Alfred  
 Maher, Thomas D.  
 Morgan, Charles L.  
 Morrow, Howard  
 Murphy, James Daniel  
 Muscot, Brayton  
 Newman, Alfred  
 Noble, Mary L.  
 O'Brien, John Henry  
 O'Brien, John Thomas  
 Oldenbourg, Louise Augusta  
 \*O'Malley, William Henry J.  
 Orr, Robert H.  
 Painter, George Louis  
 Parkman, Wallace Ernest  
 Putnam, Victor E.  
 \*Rochex, Joseph  
 Ryer, Marshall B.  
 Scott, Florence  
 \*Stafford, John T.  
 \*Stern, Arthur A.  
 Stewart, Mary J.  
 Stone, Mack V.  
 Stover, William M.  
 Thompson, Grace Feder  
 Thorpe, Lewis Sanborn  
 \*Trask, Henry Caustin  
 Trevino, Alberto  
 Waller, Newton B.



## 1897

Borchers, Bertha  
Curl, Holton C.  
Dunn, William Lawrence  
Hickey, Thomas A.  
\*Huntington, Samuel D.  
\*McMahon, Frank A.  
\*McLean, Murdoch

## 1898

Abraham, Henry  
Bartlett, Cosan Julian  
Bell, William Lisle  
Boalt, Grace S. Linforth  
Bruguere, Pedar Sather  
Callaway, Edwin  
Crowley, Thomas J.  
Duffey, George Woodward  
Fine, Henry M.  
Giroux, Edward David  
Hill, Howard Stephen  
Judell, Malvina I.  
Keenan, Alexander Stanislaus  
Lucchetti, Victor F.  
Menefee, Joseph S.  
Muller, Frederick C.  
Roche, Thomas B.  
Tillman, Frank J.  
Tobriner, Oscar D.  
Trew, Neil C.

## 1899

Arthur, Samuel Richard  
Ash, Rachel Leona  
Clark, Thomas James  
Colliver, John Adams  
Dinkelspiel, Edgar Meyer  
Ebright, George Elliot  
Emerson, Mark Lewis  
Franklin, Milton Washington  
Frick, Donald Jackson  
Gardner, Samuel James  
Gillihan, Allen Francis  
Graham, Harrington Bidwell  
Henesey, Walter Joseph  
Lanz, Paul Ruhnke  
Legge, Robert Thomas  
\*Miller, Charles Forester  
McElroy, Bernard Francis  
Onesti, Silvio Joseph  
Pope, Emma Wightman  
Pope, Saxton Temple

\* Deceased.

Rice, Edward James  
Stevens, William Emerson  
Stevenson, George Lawrence  
Taylor, James Edward  
\*Taylor, Oscar Nettleton  
Volkhardt, Vida Redington  
Weyer, Gustavus Adolphus  
Willard, William Patten

## 1900

Alderson, Harry Everett  
Bacigalupi, David Eugene  
Dorn, Dora Ida  
Doychert, Ernestine  
Farrow, Edgar James  
Fernandez, Manuel  
Harvey, William P.  
Irones, Rutherford Buchard  
Joyce, Elizabeth Frances  
Klotz, Bernard John  
Langdon, Samuel Walter Ross  
Larson, Julia Paulina  
Laughlin, Clyde Briggs  
Maguire, Thomas Michael  
McChesney, George Jewett  
McIntosh, Arthur Merrill  
Miyabe, Tadataro  
Moore, William George  
Nolan, Mary Elizabeth  
Osprig, Peter  
Pratt, Matthew Dennis  
\*Reinhardt, George Frederick  
Russ, Raymond John  
Saph, Louis Victor  
Simpson, Frank William  
Sullivan, John Francis  
Sweeney, George Joseph  
\*Vassault, Theodora Elliott  
Watts, Herbert Charles  
Wemple, Emmet LeRoy, Jr.  
Wilder, Edwin Milton

## 1901

Arthur Edgar Allen  
Beerman, Wilfred Fenton  
Dickie, Walter Murray  
Dresser, Ralph Orlando  
Force, John Nivison  
Hill, Florence McCoy  
Hill, Harold Phillips  
Hill, Reuben Chandler  
Kavanaugh, Mary Frances

Lennon, Milton Byrne  
 Leonard, John Vaughan  
 Lindsay, William Kinkade  
 Madsen, Rasmus Hansen  
 Lartigau, Kate Isabel Brady  
 Morony, Frederick Lincoln  
 \*Murphy, William James  
 Purlenky, George Philip  
 Sanborn, Fletcher Greene  
 Schmitt, Lionel Samuel  
 Seawell, James Walter  
 Simmons, Haydn Mozart  
 Smythe, Hudson  
 Sweetser, George William  
 Thomas, Benjamin  
 Toner, Joseph Michael  
 White, John Lysander  
 Woolsey, Chester Howard  
 Yanagisawa, Una Yone

1902

Bakewell, Benjamin  
 Baumgarten, William  
 Bill, Philip August  
 Buckley, Emma  
 Chilson, William Charles  
 Culver, Blanche C. Van Heusen  
 Deininger Marguerite  
 \*Fanning, Henry David  
 Foster, Ernest Charles  
 Gleason, Charles Raymond D.  
 Henderson, Frank Revere  
 Juilly, George Hippolyte  
 Kucich, Ostroilo Stanislaus  
 Lee, Adelbert Watts  
 Leimbach, John Herbert  
 Lendrum, Birney Alexander  
 Lensman, Arthur Pascal  
 Majors, Ergo Alexander  
 Mallery, John Harry  
 McGinty, Arthur Thomas  
 Meagher, Joseph Frederick  
 Merwin, Caroline Stow  
 Moulton, Dan Hazen  
 Newton, John Crockett  
 O'Donnell, Joseph Martin  
 Piper, Harry Elwin  
 \*Powers, George Herman  
 Pressley, James Fowler  
 Putnam, Frank L.  
 Quinn, Thomas D'Arcy McGee  
 Tebbe, Frederick Henry  
 Thompson, Lewis Lee

\* Deceased.

Topham, Edward  
 \*Walsh, William John  
 Williams, Walter Joseph M.  
 Zumwalt, Frederick H.

1903

Baer, Adolph  
 Biber, Paul Edward  
 Bine, Rene  
 Breitstein, Louis Isidor  
 Culver, George DeWitt  
 Ellis, James Alexander  
 Girard, Frank Robert  
 Hagan, Henrietta  
 Hamilton, James Kiah  
 Hill, Howard Gilman  
 Hurley, James Raymond  
 Johns, Madeline  
 Kavanagh, Joseph James  
 Lissner, Henry H.  
 Longabaugh, Rudolph Ignatius  
 McGuire, William Garrett  
 McKinnon, Aloysius John  
 McKown, Charles Lemon  
 McNab, Thomas Reid  
 Miner, Mark Leonard  
 Olcovich, Viola Ruth  
 Reynolds, Robert G.  
 Robarts, Harry Philip  
 Rosenberg, Caroline  
 Rutherford, Walter Scott  
 Stone, Earle Almerston  
 Stafford, David Emmet  
 West, Sydney Vattel  
 Willis, Clarence Alfred  
 Winslow, Josephine E. Barbat

1904

Baker, Morgan Dillon, Jr.  
 \*Baum, Maurice Lowell  
 Baumeister, Edward Emery  
 Brown, David William  
 Brownsall, Edith Sara  
 Castlehurn, Paul  
 Chain, John Nolan  
 Ewing, David Albert  
 Foshay, Arthur Wellesley  
 \*Harker, George Asa  
 Hector, Louise A. Linscott  
 Hector, Robert, Jr.  
 Hoag, Foster Melancton  
 Jacobs, Louis Clive  
 Kofoid, Henning

McClish, Clarke Loring  
 Mix, Pernier Albert  
 Nicholls, Robert Julian  
 Peoples, Stuart Zeno  
 Sandholdt, John Peter  
 Schwarz, Jacob  
 Slavich, John Francis  
 Smith, Eugene Keenland  
 Van Tassell, Fred Hugh  
 Waldeyer, Wilhelm  
 Warren, Henry Claud  
 Webster, Hannah Ellen

## 1905

Albee, George Cummings  
 Alexander, Edgar William  
 Bigelow, Coniah Leigh  
 Blair, James Clark  
 Bricca, Constantine Raphael  
 Briggs, George Abiel  
 Cothran, William Franklin  
 Cowden, Ambrose Franklin  
 DeHaven, Mary Tom  
 Harker, Harriette Buttler  
 Hoffman, Herman Verplanck  
 Kenny, William  
 Peck, John William  
 Reeve, Oscar Charles  
 Ryan, Louis Xavier  
 Snyder, George Samuel  
 Turner, Eldridge Curts  
 Vickerson, John Irving

## 1906

\*Adler, Alexander  
 Brasier, Olive Violet  
 dal Piaz, Antonio Menotti  
 Dannenbaum, Sydney Roy  
 Doran, Alexander Vincent  
 Eidenmuller, Jr., William Cooper  
 Franklin, John Henry  
 Hardy, Samuel Percy  
 Hays, Wilfred Bertram  
 Hunter, George Graham  
 Igo, Louise Mary  
 Jones, Charles Breckenfield  
 Kronenberg, Herman  
 Mahan, David Joseph  
 Ochsner, Richard Leon  
 Sobey, Gifford Lyne  
 Stone, Waid James  
 Temple, Jackson

Wrenn, Joseph Thomas  
 Zumwalt, Reuben Sylvester

## 1907

Alexander, Archie Addison  
 Allen, Frederick Madison  
 Bingaman, Elmer Wiley  
 Bixby, Wilfred Everett  
 Clark, John Aloysius  
 \*Craig, Lloyd Alexander  
 Dawson, William Calhoun  
 Devine, Cornelius Thomas  
 Dodds, Thomas Garfield  
 Gutzwiller, Anna Maria  
 Howell, Walter Orrin  
 Johnston, James Harvey  
 Ostrom, Earl Emmet  
 Paroni, Romilda  
 Pauson, Charles Arthur  
 Peterson, Edward August  
 Proctor, Mehitabel Clara  
 Schulze, Otto Theodore  
 Stansbury, Middleton Pemberton  
 Stoddard, Thomas Albion  
 Sylvester, Florence Mabel  
 Telfer, Gavin James  
 Walcott, Allen Moore

## 1908

Beebe, Lela June  
 Briggs, LeRoy Hewitt  
 Bunnell, Alexander Sterling  
 Cartwright, Sanford Warren  
 Foster, Harry Emerson  
 Frates, Frank Edward  
 Howe, Louis Philippe  
 Jacobs, Samuel Nicholas  
 Jee, Shin Five Pond Mooar  
 Johnson, Hans Coford  
 Lewitt, Frederick Clinton  
 Mansfield, Thomas Drummond  
 Meads, Albert Manson  
 Newman, Lester  
 Powell, Alvin  
 Sutherland, Robert Thomas

## 1909

Cohn, Herbert Jacob  
 McVey, Charles Leland  
 Meyers, Wallace Longfellow  
 Naffziger, Howard Christian  
 White, Margaret

\* Deceased.

1910

Hooker, Marion Osgood  
Irwin, Wilbur Henry  
Long, Seely Frederick, Jr.  
Moore, Chester Biven

1911

Baldwin, Walter Isaac  
Best, Eldridge John  
Bryan, Lloyd  
Campbell, William Howard  
Gompertz, Kate Rawlinson  
Markel, Howard Hill

1912

Bailey, Samuel Ellsworth  
Bush, Henry Chesley  
Cleary, Ernest Winton  
Dozier, Linwood  
Hoag, Carl Leslie  
Kelly, Frank Lewis  
Long, Herbert Everett  
Powell, Dewey Robert  
Prince, Lionel David  
Stadtmuller, Ellen Smith  
Sweet, Clifford Daniel

1913

Allen, Warren Barrett  
Aller, Daniel Irwin  
Catton, Joseph Henry  
Cornell, Earl Hamilton

Harvey, Richard Warren  
Marks, Selby Harold  
Risdon, Ruth Charlotte  
Tranter, Charles Lee

1914

Abbott, Roy Charles  
Barney, Edna Locke  
Baxter, Frank Stanley  
Berkley, Hugh Kling  
Bull, Edward Cline  
Cunningham, Ruby Lacy  
Ehlers, Henry  
Lewis, Elizabeth Grace  
Pierce, George Warren  
Rowe, Albert Holmes  
Scatena, Fred Nicholas

1915

Betts, Irvin H.  
Clapp, Gordon Adams  
Epsteen, Abelson  
Friedman, Aaron  
Gelston, Clain Fanning  
Holzberg, Henry Leopold  
Kretsinger, George Arneke  
Kruse, Fred Herman  
Maxwell, Alice Freeland  
Rehflach, John Morse  
Seaver, Holmer Carlton  
Wells, Clarence Edgar  
Woolsey, John Homer







**UNIVERSITY OF CALIFORNIA**

**MEDICAL SCHOOL**

**ANNOUNCEMENT FOR 1916-17**

**UNIVERSITY OF CALIFORNIA HOSPITAL  
PARNASSUS AND SECOND AVENUES  
SAN FRANCISCO**





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## CALENDAR

1916

- July 1—Undergraduate applications for admission to the Medical School, with credentials, should be filed at the Dean's office. This may be done by mail.
- August 10 (Thursday)—15 (Tuesday)—Entrance examinations at Berkeley for freshman standing (pre-medical) in the College of Letters and Science. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before August 9 (Wednesday). But applications for permits to be sent by mail should be made as far in advance of August 9 (Wednesday) as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall, Berkeley.
- August 14 (Monday)—Academic year begins.
- August 14 (Monday)—Examinations begin for applicants for advanced standing and for students previously conditioned.
- August 17 (Thursday), 18 (Friday), 19 (Saturday), 9 a.m.—12 m.—Registration of students of all classes at Secretary's office in the main building of the Medical School in San Francisco.
- August 21 (Monday)—Class work begins. *Payment of the first installment of the tuition fee is required on or before this date.*
- November 30 (Thursday)—December 2 (Saturday)—Thanksgiving recess.
- December 11 (Monday)—Examinations begin.
- December 18 (Monday)—Christmas vacation begins.

1917

- January 8 (Monday)—Second half-year; class work begins. *Payment of the second installment of the tuition fee is required on or before this date.*
- March 23 (Friday)—Charter Day; a holiday.
- April 30 (Monday)—Examinations begin.
- May 16 (Wednesday)—Commencement.
- May 17 (Thursday)—August 11 (Saturday)—Summer vacation.
- August 13 (Monday)—Academic year begins.
- August 13 (Monday)—Examinations begin for applicants for advanced standing and for students previously conditioned.
- August 16 (Thursday), 17 (Friday), 18 (Saturday), 9 a.m.—12 m.—Registration of students of all classes at Secretary's office in main building of the Medical School in San Francisco.
- August 20 (Monday)—Class work begins.
- November 29 (Thursday)—December 1 (Saturday)—Thanksgiving recess.
- December 10 (Monday)—Examinations begin.
- December 17 (Monday)—Christmas vacation begins.

1918

- January 7 (Monday)—Second half-year; class work begins.



## **ORGANIZATION AND HISTORY**



# REGENTS OF THE UNIVERSITY

NOTE.—The regular meetings of the Regents are held at 2 P.M. on the second Tuesday of each month, except July, and on the day before commencement, at such places as may from time to time be determined, ordinarily at the San Francisco Institute of Art, California and Mason streets, San Francisco. The Los Angeles office of the Regents is in Room 417, Union League Building, Los Angeles.

## REGENTS EX OFFICIO

HIS EXCELLENCY HIRAM WARREN JOHNSON  
Governor of California and President of  
the Regents  
Sacramento

Lieutenant-Governor of California

CLEMENT CALHOUN YOUNG, B.L.  
Speaker of the Assembly  
Shattuck av and Addison st, Berkeley

Hon. EDWARD HYATT  
State Superintendent of Public Instruc-  
tion  
Sacramento

Hon. JOHN M. PERRY  
President of the State Agricultural  
Society  
10 W. Weber av, Stockton

LIVINGSTON JENKS, A.B., LL.B.  
President of the Mechanics' Institute  
Mills bldg, San Francisco

BENJ. IDE WHEELER, Ph.D., LL.D.,  
Litt.D.  
President of the University  
217 California Hall, Berkeley

## APPOINTED REGENTS

The term of the appointed Regents is sixteen years, and terms expire March 1, of the year indicated in parentheses. The names are arranged in the order of original accession to the board.

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Wells Fargo-Nevada National Bank,  
San Francisco

Mrs. PHOEBE APPERSON HEARST (1930)  
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Business address: 410 Hearst bldg, San  
Francisco

ARTHUR WILLIAM FOSTER, Esq. (1932)  
1210 James Flood bldg, San Francisco

GARRETT WILLIAM McENERNEY, Esq.  
(1920)  
1277 James Flood bldg, San Francisco

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Main and Mission sts, San Francisco

GUY CHAFFER EARL, A.B. (1918)  
14 Sansome st, San Francisco

JAMES WILFRED MCKINLEY, B.S. (1922)  
706 Security bldg, Los Angeles

JOHN ALEXANDER BRITTON, Esq. (1930)  
445 Sutter st, San Francisco

CHARLES STETSON WHEELER, B.L. (1928)  
Nevada Bank bldg, San Francisco

WILLIAM HENRY CROCKER, Ph.B. (1924)  
Crocker National Bank, San Francisco

PHILIP ERNEST BOWLES, Ph.B. (1924)  
American National Bank, San Francisco

JAMES KENNEDY MOFFITT, B.S. (1924)  
First National Bank, San Francisco

CHARLES ADOLPH RAMM, B.S., M.A.,  
S.T.B. (1928)  
1100 Franklin st, San Francisco

EDWARD AUGUSTUS DICKSON, B.L. (1926)  
1631 Cimarron st, Los Angeles

JAMES MILLS, Esq. (1926)  
Hamilton City

CHESTER HARVEY KOWELL, Ph.B. (1920)  
Fresno.



## OFFICERS OF THE REGENTS

His Excellency Hiram Warren Johnson  
President  
Sacramento

Ralph Palmer Merritt, B.S.,  
Comptroller  
220 California Hall, Berkeley

Victor Hendricks Henderson, B.L.  
Secretary and Land Agent  
209 California Hall, Berkeley

Mortimer Fleishhacker, Esq.  
Treasurer  
Anglo-California Trust Company, San  
Francisco

Warren Olney, Jr., A.B., LL.B.  
Attorney  
1107 Merchants' Exchange bldg,  
San Francisco

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*Agriculture:*

Regents Foster, Dickson, Jenks, Mills,  
and Perry.  
Regent Bowles, alternate.

*Curriculum and Degrees:*

Regents Rowell, Moffitt, and C. S.  
Wheeler.

*Finance:*

Regents Earl, Foster, Britton, Moffitt,  
Taussig, and, as Member Emeritus,  
Regent Hellman.

*Grounds and Buildings:*

Regents Britton, Mrs. Hearst, Jenks,  
Bowles, and C. S. Wheeler.

*Lick Observatory:*

Regents Ramm, Crocker, McEnerney,  
and Young.

*Medical Instruction:*

Regents Crocker, Moffitt, Ramm, Dick-  
son and Taussig.

*San Diego Marine Biological Laboratory:*  
Regents Dickson and Hyatt.

*University Hospital:*

Regents Crocker, Taussig, Britton, Earl,  
and Moffitt.

*Wilmerding School:*

Regents Taussig, Earl, and Moffitt.

*Executive Committee:*

This committee consists of the chairmen  
of all standing committees.

THE GEORGE WILLIAMS HOOPER FOUNDATION FOR  
MEDICAL RESEARCH

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E. D. CONNOLLY, San Francisco.

A. W. FOSTER, Regent of the University.

HERBERT C. MOFFITT, Dean of the Medical School.

HENRY S. PRITCHETT, President of the Carnegie Foundation.

WILLIAM H. WELCH, Professor of Pathology, Johns Hopkins Medical School.

GEORGE H. WHIPPLE, Director of the Research Laboratory.

\* The President of the Board of Regents and the President of the University are *ex officio* members of all committees of the Board. In each committee the name of the chairman is first and the name of the vice-chairman second.

## FACULTY AND TEACHING STAFF\*

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### PRESIDENT OF THE UNIVERSITY

BENJAMIN IDE WHEELER, Ph.D., LL.D., Litt.D., California Hall, Berkeley.

### EMERITUS PROFESSORS

- ROBERT A. McLEAN, M.D., *Emeritus Professor of Surgery*,  
Berkeley, California.
- CHARLES A. VON HOFFMANN, M.D., *Emeritus Professor of Gynecology*,  
2669 California street, San Francisco.
- THOMAS W. HUNTINGTON, A.B., M.D., *Emeritus Professor of Clinical Surgery*,  
516 Sutter street, San Francisco.
- WILLIAM B. LEWITT, M.D., *Emeritus Professor of Pediatrics*,  
210 Post street, San Francisco.

### PROFESSORS

- HERBERT C. MOFFITT, B.S., M.D., *Professor of Medicine*,  
240 Stockton street, San Francisco.
- †FREDERICK P. GAY, A.B., M.D., *Professor of Pathology*,  
Department of Pathology, University of California, Berkeley.
- WALLACE I. TERRY, B.S., M.D., *Professor of Surgery*,  
240 Stockton street, San Francisco.
- WILLIAM PALMER LUCAS, A.B., M.D., *Professor of Pediatrics*,  
University Hospital, San Francisco.
- GEORGE HOYT WHIPPLE, A.B., M.D., *Professor of Research Medicine*,  
University Hospital, San Francisco.
- HERBERT McLEAN EVANS, B.S., M.D., *Professor of Anatomy*,  
Department of Anatomy, University of California, Berkeley.
- FRANK WORTHINGTON LYNCH, A.B., M.D., *Professor of Obstetrics and Gynecology*,  
University Hospital, San Francisco.
- T. BRAILSFORD ROBERTSON, Ph.D., Sc.D., *Professor of Biochemistry*,  
2619 Regent street, Berkeley.

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\* Voting members are those above the rank of instructor.

† Absent on leave, first half-year, 1916-17.

## CLINICAL PROFESSORS

- WILLIAM WATT KERR, A.M., C.M., M.B., *Clinical Professor of Medicine*,  
391 Sutter street, San Francisco.
- HOWARD MORROW, M.D., *Clinical Professor of Dermatology*,  
135 Stockton street, San Francisco.
- WILLIAM BOERICKE, M.D., *Clinical Professor of Homeopathic Materia Medica*,  
391 Sutter street, San Francisco.
- WILBUR A. SAWYER, A.B., M.D., *Clinical Professor of Preventive Medicine and Hygiene*,  
California State Board of Health, Sacramento.

## ASSOCIATE PROFESSORS

- SAMUEL STEEN MAXWELL, Ph.D., *Associate Professor of Physiology*,  
Department of Physiology, University of California, Berkeley.
- ROBERT ORTON MOODY, B.S., M.D., *Associate Professor of Anatomy*,  
Department of Anatomy, University of California, Berkeley.
- ERNEST L. WALKER, B.A.S., S.B., S.D., *Associate Professor of Tropical Medicine*,  
University Hospital, San Francisco.
- KARL FREDERICK MEYER, A.B., D.V.M., *Associate Professor of Tropical Medicine*,  
University Hospital, San Francisco.
- GLANVILLE Y. RUSK, A.B., M.D., *Associate Professor of Pathology*,  
Department of Pathology, University of California, Berkeley.
- HARDOLPH WASTENEYS, Ph.D., *Associate Professor of Pharmacology*,  
Department of Biochemistry, University of California, Berkeley.

## ASSISTANT PROFESSORS

- \*JEAN V. COOKE, A.B., M.D., *Assistant Professor of Pathology*,  
University Hospital, San Francisco.
- THEODORE C. BURNETT, M.D., *Assistant Professor of Physiology*,  
Department of Physiology, University of California, Berkeley.
- IVAN C. HALL, M.S., *Assistant Professor of Bacteriology*,  
Department of Pathology, University of California, Berkeley.
- GEORGE W. CORNER, A.B., M.D., *Assistant Professor of Anatomy*,  
Department of Anatomy, University of California, Berkeley.
- EUGENE S. KILGORE, B.S., M.D., *Assistant Professor of Medicine*,  
University Hospital, San Francisco.

---

\* Absent on leave, second half-year, 1916-17.

# ASSISTANT CLINICAL PROFESSORS

- GEORGE HERBERT EVANS, M.D., *Assistant Clinical Professor of Medicine*,  
233 Post street, San Francisco.
- HAROLD BRUNN, M.D., *Assistant Clinical Professor of Surgery*,  
135 Stockton street, San Francisco.
- HERBERT W. ALLEN, B.S., M.D., *Assistant Clinical Professor of Medicine*,  
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- ALBERT J. HOUSTON, B.L., M.D., *Assistant Clinical Professor of Laryngology*,  
*Otology and Rhinology*, 350 Post street, San Francisco.
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---

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- LUDWIG A. EMGE, M.D., *Assistant in Obstetrics and Gynecology*,  
University Hospital, San Francisco.
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- EDNA LOCKE BARNEY, M.S., M.D., *Assistant in Surgery*,  
2711 Dana street, Berkeley.
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4112 Twenty-fourth street, San Francisco.
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- JOHN HOMER WOOLSEY, M.S., M.D., *Assistant in Surgery*,  
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- CLAIN FANNING GELSTON, M.S., M.D., *Assistant in Pediatrics*,  
University Hospital, San Francisco.
- MABEL FARRINGTON GIFFORD, *Assistant in Pediatrics*,  
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Department of Pathology, University of California, Berkeley.
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- CARL L. A. SCHMIDT, *Research Assistant in Pathology*,  
Department of Pathology, University of California, Berkeley.
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Department of Physiology, University of California, Berkeley.
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Department of Physiology, University of California, Berkeley.
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University Hospital, San Francisco.

#### VOLUNTARY ASSISTANTS

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126 Stockton street, San Francisco.

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F. P. GAY, M.D.	Pathologist
H. MORROW, M.D.	Dermatologist
W. S. FRANKLIN, M.D.	Ophthalmologist
A. J. HOUSTON, M.D.	Laryngologist
L. S. SCHMITT, M.D.	Serologist
M. B. LENNON, M.D.	Neurologist
F. HINMAN, M.D.	Urologist
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E. S. KILGORE, M.D.	Assistant Physician
J. L. WHITNEY, M.D.	Assistant Physician
S. T. POPE, M.D.	Assistant Surgeon
H. C. NAFFZIGER, M.D.	Assistant Surgeon
W. I. BALDWIN, M.D.	Assistant Surgeon
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M. KAVANAUGH, M.D.	Anesthetist
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J. C. NEEL, M.D. ....	Assistant in Woman's Clinic
L. I. BREITSTEIN, M.D. ....	Assistant in Woman's Clinic
R. L. ASH, M.D. ....	Assistant Pediatrician
OLGA BRIDGMAN, M.D. ....	Assistant Pediatrician
V. B. APPLETON, M.D. ....	Assistant Pediatrician
ETHEL M. WATTERS, M.D. ....	Assistant Pediatrician
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A. W. LEE, M.D. ....	In charge of Medical Photography

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— —, M.D. ....	Resident Surgeon
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LINTON Gerdine, M.D. ....	Resident Pediatrician
J. H. WOOLSEY, M.D. ....	Assistant Resident Surgeon
ALICE F. MAXWELL, M.D. ....	Assistant Resident in Woman's Clinic
C. F. GELSTON, M.D. ....	Assistant Resident Pediatrician

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F. W. LYNCH, M.D., Director of Woman's Clinic.
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L. LANGSTROTH, M.D.	

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B. W. HARVEY, M.D.

## PSYCHIATRY

EVA C. REID, M.D., Chief of Clinic.

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OLGA BRIDGMAN, Psychologist.

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V. B. APPLETON, M.D.

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S. A. WHITE, D.D.S.

E. M. WATERS, M.D.

ETHEL S. VALENTINE

## GENERAL SURGERY

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H. S. THOMSON, M.D.

E. L. BARNEY, M.D.

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B. O'CONNOR, M.D.

E. F. GLASER, M.D.

F. B. EATON, M.D.

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H. B. CHRISTIANSEN, M.D.

F. C. LEWITT, M.D.

J. B. THOMAS, M.D.

A. W. JOHNSON, M.D.

F. M. SHOOK, M.D.

## UROLOGY

F. HINMAN, M.D., Chief of Clinic.

J. F. PRUETT, M.D.

J. V. LEONARD, M.D.

H. PARTRIDGE, M.D.

## ORTHOPEDIC SURGERY

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H. H. MARKEL, M.D.

H. W. WRIGHT, M.D.

R. C. ABBOTT, M.D.

A. L. FISHER, M.D.

MARGARET ANDREW, in charge of Medical Gymnastics.

SIGNE HAGELTHORN, Assistant in Medical Gymnastics.

J. W. RHODES, Mechano-Therapist.

F. E. BOERKE, Mechano-Therapist.

**WOMAN'S CLINIC**

W. G. MOORE, M.D. }	Chiefs of Clinic.	L. A. EMGE, M.D.
J. C. NEEL, M.D. }		ALICE F. MAXWELL, M.D.

**TUBERCULOSIS CLINIC**

G. H. EVANS, M.D., Chief of Clinic.	ESTHER ROSENCRANTZ, M.D.
L. S. MACE, M.D.	

**SEROLOGICAL LABORATORY**

L. S. SCHMITT, M.D., Chief	Miss HELEN BRUCKMAN
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**SOCIAL SERVICE DEPARTMENT**

LOUISE MORROW, M.D., Director of Social Service.  
 MAUDE E. MORRISON, R.N., Prenatal Nurse.  
 SUSAN M. BRIGGS, R.N., Prenatal Nurse.  
 KATE M. DAVIS, R.N., Infant Welfare Nurse.  
 LILLIAN M. FARNSWORTH, Assistant Social Worker.  
 ROSE STEINHART, Assistant Social Worker, in charge of Infants.

**SAN FRANCISCO HOSPITAL MEDICAL STAFF**

W. W. KERR, M.D. ....	Physician-in-Chief
HAROLD BRUNN, M.D. ....	Surgeon-in-Chief
W. P. LUCAS, M.D. ....	Pediatrician-in-Chief
HOWARD MORROW, M.D. ....	Dermatologist
J. V. COOKE, M.D. ....	Pathologist
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M. B. LENNON, M.D. ....	Neurologist
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L. I. BREITSTEIN, M.D. ....	Obstetrician
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F. C. LEWITT, M.D. ....	Laryngologist
G. E. EBBRIGHT, M.D. ....	Assistant Visiting Physician
J. B. FRANKENHEIMER, M.D. ....	Assistant Visiting Physician
L. S. MACE, M.D. ....	Assistant Visiting Physician
J. H. CATTON, M.D. ....	Assistant Visiting Physician
ESTHER ROSENCRANTZ, M.D. ....	Assistant Visiting Physician
L. P. HOWE, M.D. ....	Assistant Visiting Surgeon
H. C. NAFFZIGER, M.D. ....	Assistant Visiting Surgeon
R. W. HARVEY, M.D. ....	Assistant Visiting Neurologist
EDWARD TOPHAM, M.D. ....	Assistant Obstetrician
B. STONE, M.D. ....	Assistant Dermatologist

**RESIDENT HOUSE STAFF (SAN FRANCISCO HOSPITAL)**

— —, M.D., Resident Physician.

**I. H. BETTS, M.D., Resident Surgeon.**

**INTERNS**

**MARY CRAIG, M.D.**

**W. D. HORNER, M.D.**

**L. M. MORRIS, M.D.**

**J. A. OWEN, M.D.**

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## HISTORY AND DEVELOPMENT OF THE SCHOOL

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In 1862 Dr. H. H. Toland erected a building to serve as the nucleus of a medical school. This was subsequently known as Toland Hall, and in 1872 was formally transferred to the Regents of the University of California as a department of the University. For many years the affiliation was merely nominal and the medical faculty was in entire control of the policy of the school, the support of the institution being derived from fees of the students.

In 1895 the course of instruction was extended from three to four years. In 1898 the school was moved to its present location on Parnassus Heights, a tract of land of thirteen and one-half acres donated to the University by the late Adolph Sutro. Funds were provided by the Legislature to erect buildings for law, medicine, dentistry and pharmacy, and at a later date the law building was transferred by the Board of Regents to the Medical School.

In 1902 the Board of Regents adopted a resolution of vital importance to the Medical School. Instead of preserving the former loose affiliation it was determined to regard the medical department as an integral part of the University. The properties of the school were transferred to the University, the students' fees were turned into the general University fund and support of the school was assumed by the Regents. The first two years of medicine were at once put upon an academic basis and suitable laboratories equipped.

With the destruction of the Out-Patient Department by the earthquake and fire of 1906 it became necessary to transfer the work of the first two years to Berkeley and to transform the main building of the school into a hospital and out-patient clinic. In December, 1911, the Regents of the University announced their intention of bringing together the various departments of the school, of providing a proper modern teaching hospital and of placing the clinical years upon an academic basis. Therefore, on April 9, 1912, it was resolved to consolidate all departments of the school in San Francisco as soon as feasible. A recommendation of the President of the University was adopted which provided a plan of reorganization for the clinical years.

Clinical instruction is now divided into four main departments—Medicine, Surgery, Diseases of Women, and Pediatrics. The departments of Obstetrics and Gynecology and Pediatrics are in charge of full-time teachers, and as soon as possible the departments of Medicine and Surgery will be placed upon the same basis.

In 1914 a Department of Tuberculosis and a Department of Psychiatry were established and work in these departments included in the curriculum.

In 1915 arrangements were perfected by which an agreement with the Hospital for Children and Training School for Nurses was brought about and in the same year the Regents of the University agreed to take over the Hahnemann Medical College of the Pacific and to include electives in Homeopathy in the curriculum of the Medical School.

In 1916 Biochemistry was separated from Physiology and a department of Biochemistry and Pharmacology established. A department of Preventive Medicine and Hygiene has also been started.

During the same year the Regents adopted a plan for the future development of the school. This plan contemplates the building of a nurses' home in connection with the new University Hospital, new buildings to house the departments of Anatomy and Pathology, the erection of an out-patient building, the adaptation of existing buildings for purposes of administration, students' quarters, laboratories, library space, and to house the departments of Physiology and Biochemistry.

#### THE GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH

In memory of her husband, George Williams Hooper, a pioneer citizen of San Francisco, Mrs. Hooper, on Commencement Day, May 14, 1913, transferred to the Regents of the University certain valuable property to serve as a foundation for an institute of medical research. The income at present provided is \$50,000 a year, but \$100,000 per annum will be available in a few years.

The formal opening of the Foundation was celebrated on March 7, 1914. Addresses were delivered by Dr. Henry S. Pritchett, President of the Carnegie Foundation for the Advancement of Teaching; Dr. Richard M. Pearce, Professor of Research Medicine, University of Pennsylvania; and Hon. Curtis H. Lindley. The policy and work of the Foundation is determined by an advisory board of seven members conferring with the Regents of the University.

The building formerly occupied by the Veterinary School has been devoted by the Regents of the University to the work of the Foundation. Dr. George H. Whipple, formerly Associate Professor of Pathology in Johns Hopkins University, is Director, and is also Professor of Research Medicine in the Medical School. The work of the Hooper Foundation, therefore, will be closely correlated with that of the Medical School. Men at work in the Research Laboratory will have free access to the University Hospital wards and positions in the Hooper Foundation will be available for men in the Medical School who desire to enter a career in research medicine. The work of the Hooper Foundation in no way replaces any of the research in each department of the Medical School.





**REQUIREMENTS FOR ADMISSION  
AND GRADUATION**



## REQUIREMENTS FOR ADMISSION\*

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A preliminary collegiate preparation is required for the course in medicine, and men and women are admitted on the same terms. As candidates for the degree of Doctor of Medicine the school receives the following:

1. Graduates of approved colleges or scientific schools who present evidence of a satisfactory training in chemistry, physics and zoology and a reading knowledge of German or French. The courses in chemistry must include inorganic and organic chemistry.

2. Students in the College of Letters and Science of this University who have attained senior standing may, at the beginning of their fourth or senior year in the University, register as students in the Medical School, and upon completion of the first year in the Medical School may receive the bachelor's degree in the College of Letters and Science. Such students must also furnish evidence that they have had a satisfactory training in chemistry, physics, and zoology, and that they possess a reading knowledge of German or French.

3. Students who has satisfactorily completed at least two full years of collegiate work and who have received the junior certificate of this University, or its equivalent.

The studies pursued during the two years which lead to the junior certificate include English, American history and civics, mathematics, chemistry, biology (zoology), physics, and German or French. Applicants for admission to the Medical School who have pursued their pre-medical studies in some other university must submit credentials from the institution in which they have studied. This statement should include the number of hours devoted to classroom and laboratory work and also the grade received in each subject. For the guidance of those who wish to arrange their preliminary training the following courses given in this University present the minimum of satisfactory preparation in the sciences named (numbers refer to the Announcement of Courses for 1916-17): Chemistry 1A-1B, 8A-8B, 9; Physics 2A-2B, and 3B; Zoology 1A, 1B, 108. These courses are described below.

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\* All inquiries should be addressed to the Dean of the University of California Medical School.

**CHEMISTRY****1A-1B. General Inorganic Chemistry and Qualitative Analysis.**

3 hrs., lectures and quiz, and 4 hrs. laboratory work, throughout the year; 5 units each half-year.

Lectures and quiz.

Assistant Professor HILDEBRAND, Professor LEWIS, Associate Professor BRAY, Assistant Professor BOOTH, Drs. GIBSON, ADAMS, ARGO, and BRANCH.

Two sections: M W F, 9; M W F, 10.

Laboratory.

Assistant Professor BOOTH, Associate Professor BRAY, Professor LEWIS, Assistant Professor HILDEBRAND, Drs. GIBSON, ADAMS, ARGO, and BRANCH.

Four sections: I, M F, 1-3; II, Tu Th, 9-11; III, Tu Th, 1-3; IV, W, 1-3, 8, 9-11. Prerequisite: matriculation chemistry subject 12b. In special cases students who have credit for matriculation physics may be allowed to take this course without the chemistry prerequisite, but in no case without the written consent of the instructor.

**8A-8B. Elements of Organic Chemistry. Assistant Professor BIDDLE.**

An introductory study of the compounds of carbon. Recitations and lectures with experimental illustrations. Laboratory course 9 should, if possible, accompany this course.

2 hrs., throughout the year. Lectures, Tu Th, 8.

Fortnightly quiz, hour to be arranged, probably M or Tu, 4.

**9. Elements of Organic Chemistry; Laboratory.**

Assistant Professor BIDDLE.

A comparative experimental study of the physical properties and chemical reactions of the more commonly occurring classes of organic substances. Supplementary to course 8A-8B and open to all students pursuing that course.

6 to 9 hrs., either half-year, 2 to 3 units. M W, M F, or M W F, 1-4.

**PHYSICS****2A-2B. Lectures.**

Professor LEWIS.

Mechanics, properties of matter, heat, sound, light, energy transformation, electricity, and magnetism.

3 hrs., throughout the year; 3 units each half-year. Tu Th S, 11. Prerequisite: matriculation subject 11.

**3a. Physical Measurements.****Associate Professor MINOR.**

Experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. Methods are selected so as to show instructive relations of physical principles and their adaptation to practical problems. Laboratory exercises twice a week. This course is usually taken in conjunction with 2A-2B.

6 hrs., second half-year; 2 units. Tu Th, 1-4. Prerequisite: matriculation subject 11.

**ZOOLOGY****1a. General Zoology.**

**Professor KOFID, Associate Professor HOLMES, Assistant Professor DANIEL, Mr. BARROWS and Assistants.**

An introduction to the facts and principles of animal biology, with special reference to the structure, functions, and evolution of animal life.

Lectures, 2 hrs., demonstrations, 4 hrs., first half-year; 4 units. Lectures Tu Th, 10. Demonstrations, five sections: I, M W, 8-10; II, M F, 2-4; III, Tu Th, 8-10; IV, Tu Th, 2-4; V, W, 2-4, S, 8-10.

The laboratory exercises are essentially illustrative of lectures and are based on the examination of living and prepared specimens, supplemented by models and charts.

**1b. General Zoology.****Assistant Professor DANIEL and Assistants.**

A continuation of course 1a. A study of the behavior, structure and development of animal types, with special reference to the lower vertebrates.

6 hrs., second half-year, 4 units. Lectures, Tu Th, 10. Laboratory, three sections: I, Tu Th, 8-10; II, Tu Th, 2-4; III, W, 2-4, S, 8-10. Prerequisite: course 1a.

**108. Embryology.****Assistant Professor LONG.**

The phenomena of animal development, fundamental facts of reproduction, comparative embryology and organogeny of the higher vertebrates. Lectures, reading, and laboratory.

8 hrs., first half-year; 4 units. Lectures, Tu Th, 9. Laboratory, two sections: I, Tu Th, 8-9, 10-12; II, Tu Th, 1-4. Prerequisite: courses 1a and 1b.

The following courses offered in the Summer Session of 1916 may be substituted for those of the above designated by similar numbers.

### CHEMISTRY

S8A. Elements of Organic Chemistry. Professor GOMBERG.

An introduction to the study of compounds of carbon. Recitations and lectures with experimental illustrations. 2 units.

M Tu W Th F, 11.

S9. Elements of Organic Chemistry; Laboratory. Dr. BRANCH.

An experimental study of basic organic reactions. 2 units.

M Tu W Th F, 9-12.

### PHYSICS

S3. Physical Measurements. Professor KUNSMAN.

A laboratory course in general physics, offering opportunity for experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. The course will be adapted to the needs of individual students and may cover any portion of the laboratory work of the regular session. Credit, not to exceed 4 units, may be given for the course. Prerequisite: high school physics.

M Tu W Th F, 9-12 and 1-4.

S4. General Physics. Professor KUNSMAN.

A recitation and problem course in general physics, embracing either mechanics, properties of matter and heat, or sound, light and electricity. Prerequisite: high school physics. 2 units.

M Tu W Th F, 10.

### ZOOLOGY

S108. Embryology. Professor ALLEN and Mr. TAYLOR.

The fundamental facts of reproduction, the early stages of development of vertebrates, the formation of organs, and the foetal membranes of mammals, including man. Laboratory study of preparations of chick and pig embryos. Lectures, demonstrations. Laboratory fee \$5. Prerequisite: courses 1A and 1B, or equivalents. 4 units.

M Tu W Th F, 8-12.

In preparation for these studies it may be mentioned that high school physics and chemistry are necessary in order to enroll in the beginning university courses in the same subjects. Whereas these requirements as specified will be accepted for admission in the medical school, it should be pointed out that it is highly desirable that the student should not content himself with the acquisition of a junior certificate, but should take at least three years of college work, if possible. By this means not only is more time offered for work in subjects of general culture outside the scientific requirements but by a combined eight-year course (three years as an undergraduate in the university and five years in the medical school) the two degrees of A.B. and M.D. may be obtained.

Students taking the combined course have the privilege of broad election from the various departments of the University, and they are advised to make their selection from subjects not related to the specific requirements.

The faculty of the Medical School is authorized to refuse admission to students who have a low academic record.

#### ADMISSION TO ADVANCED STANDING

Applicants for admission to advanced standing may become candidates for the degree of M.D. under the following conditions: (1) They must furnish evidence that they were eligible for admission to the first year of this school. (2) They must show that courses equivalent in kind and amount to those given in this school in the year or years preceding that to which admission is desired have been satisfactorily completed in an acceptable medical school.\* Students taking work at a college with a lower classification will not be granted credit. (3) At the discretion of the Dean, they must be prepared to pass examinations in those subjects for which they ask credit.

#### INSTRUCTION FOR GRADUATES IN MEDICINE

Graduates in medicine may arrange with the heads of the different departments for special work. Graduate students may enter at any time during the year and must register at the Dean's office before beginning work.

Except under extraordinary circumstances and at the discretion of the Advisory Board of the Medical Faculty, persons who have already received the degree of Doctor of Medicine will not be admitted as candidates for that degree from this University.

\* By an acceptable medical school is meant one classified as "A" by the American Medical Association, and whose entrance requirements are equivalent to those of this School.



### CLASS STANDING AND EXAMINATION

The judgment of an instructor upon the work of a student may be determined by (a) personal contact and observation of routine work, (b) by oral, written or practical examination, (c) by a combination of these methods.

It is optional with each department whether students are examined at the end of each course or examined when the work of a department is completed.

For the determination of the students' right to advancement and graduation each department makes such rules as it deems necessary, and the result is indicated as "Passed with Honor," "Passed," or "Not Passed."

At the end of the third half-year and at the end of the period of required work the students' records are referred to the respective committees on instruction for review. Students who fail to pass in any two major subjects, in one major and three minor subjects, or in six minor subjects may be dropped from the Medical School. Students who fail to pass in a major subject or in three minor subjects will be placed on probation and must take a second examination before the following half-year. Students who fail in the second examination may be dropped from the Medical School.

Students who have an unabsolved failure in any one subject of the first three half-years will not be permitted to enter the third year except by recommendation of the Advisory Board of the Medical School.

Students who have an unabsolved failure at the end of the fourth year will not be recommended as entitled to the degree of Doctor of Medicine or permitted to enter their intern year until the failure is absolved in such manner as may be indicated by the Advisory Board of the Medical School.

The Faculty reserves the right to sever the connection of any student with the Medical School at any time for what it deems either mental, physical, or moral unfitness for a career in medicine.

### LEAVES OF ABSENCE

Students who withdraw from the Medical School without notice or who fail to report after a leave of absence may have their connection with the Medical School terminated.

### REQUIREMENTS FOR GRADUATION

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years and must be of good moral character. He must have studied medicine for four full years and must have attended

four annual courses as a matriculated student (not including the fifth, or intern year), the last of which has been spent in this school. He must have completed the required work, have fulfilled satisfactorily all special requirements, and have received a satisfactory grade throughout the entire medical course. He must have discharged all indebtedness to the school. In addition, after 1914, students entering the school will be required to supplement the academic course in medicine with a year as intern in an approved hospital or laboratory, or as a special worker in a department of the Medical School.

### CURRICULUM IN PUBLIC HEALTH

At the beginning of the second half of the fourth year in the Medical School students may elect to enter Public Health Curriculum C. This curriculum extends over a year and a half, and on its satisfactory completion the candidate is granted the degrees of Doctor of Medicine and Graduate in Public Health (Gr.P.H.).

The first year is devoted to courses offered by the various colleges of the University in Berkeley and the last half-year is devoted to work given in the Medical School.

### PUBLIC HEALTH CURRICULUM C

#### FOURTH YEAR IN MEDICINE

#### *Second Half-year (Berkeley)*

Subjects	Units
Civil Engineering 109A .....	2
Civil Engineering 109B .....	1
Civil Engineering 123 .....	2
Civil Engineering 126 .....	2
Entomology 126 .....	3
Entomology 127 .....	2
Hygiene 104 .....	3
Hygiene 108 .....	3
Political Science 115B .....	1
Zoology 109C .....	1

**FIFTH YEAR IN MEDICINE**  
***First Half-year (Berkeley)***

Subjects	Units
Civil Engineering 111A .....	2
Civil Engineering 111B .....	1
Civil Engineering 123 .....	2
Civil Engineering 125 .....	2
Economics 110A .....	3
Nutrition 117 .....	3
Veterinary Science 117 .....	3
Political Science 115A .....	1
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***Second Half-year (Medical School)***

Courses in occupational diseases and school inspection; volunteer service in a federal, state, or municipal health service. Field work in epidemiology; research, thesis.

For students in public health and graduates in sanitary engineering provision is made in Public Health Curricula A and B, each leading to the degree of Graduate in Public Health. The instruction of the last year in each of these two curricula is given in the Medical School. Outlines of these curricula will be found in the *Announcement of the Graduate Division* and the *Circular of Information*.

## **GENERAL INFORMATION**



## REGISTRATION

Applications for admission and for advanced standing must be addressed to the Dean of the Medical School, San Francisco. *They must be received at least one month prior to the beginning of the term, to allow time for investigation.*

Students will not be admitted to medical courses until they have registered at the office of the Secretary of the Medical School, Parnassus and Second avenues, San Francisco.

## FEES

The charge for tuition is one hundred and fifty dollars per annum, payable in two installments, August and January. Students will not be admitted to the courses until they have paid their fees for the ensuing half-year. A key and breakage deposit of \$25 in the first and second years and of \$10 in the third and fourth years is required for the use of lockers and to cover the cost of material used in laboratories and possible damage to college buildings and equipment.

In the first year there is an additional fee of \$15 for dissecting material, \$5 for each part.

Students not appearing for examinations on specified dates will be required to pay a fee of five dollars for a special examination.

Students registered in the Medical School and taking less than the required amount of work in any given half-year are required to pay a proportionate fee for tuition. Such students must first obtain the permission of the Medical Faculty.

## MICROSCOPES AND BLOOD-COUNTING APPARATUS

Students are advised to purchase their own microscopes, but those who do not care to do so may rent one from the school at a cost of five dollars per annum, with an additional charge of two dollars if an oil immersion lense is desired. Students using microscopes which belong to the school are liable for damage done the instruments while in their possession.

*The character of the practical work requires that each student own a blood-counting apparatus. This should be purchased at the beginning of the second half of the second year.*

Students are also required to supply themselves with the necessary slides and coverslips.

### MEDICAL SUPERVISION OVER STUDENTS

Each year the faculty appoints a medical adviser to the students in the Medical School. This officer keeps a definite hour for consultation and when necessary visits students in their homes. Through him the services of specialists are secured when indicated.

Students of the first- and second-year classes are entitled to the advantages offered by the University of California Students' Infirmary in Berkeley. Students resident in Berkeley and requiring hospital care are provided for in the Infirmary without charge, unless special nurses are necessary. Students of the third and fourth classes are similarly provided for in the University Hospital. A number of beds have recently been endowed for this purpose.

Medical students, as well as all other students, in the University of California are required to pass a physical examination by the Medical Examiner before entrance to the University.

### LIBRARIES

Instruction in the medical sciences and the various branches of clinical medicine is incomplete without constant reference to current and authoritative monographic and periodical literature. In research work the need of a complete reference library is obvious.

Each of the departments in Berkeley—Anatomy, Physiology, Biochemistry, Pathology and Bacteriology—contains a separate departmental library which, although a unit of the general University Library, is thus segregated as part of the working equipment of each department. Through the generosity of Mrs. Phoebe A. Hearst and Mrs. William H. Crocker, these departmental libraries are unusually complete; they also participate in the annual distribution of University Library funds.

The library at the Medical School in San Francisco contains a good collection of textbooks and monographs, which is increased each year through a special annual appropriation. The best current journals in French, German, and English are on file. A trained librarian is in charge of this library.

### LABORATORIES AND CLINICAL OPPORTUNITIES

Medical instruction of the first year and a half is carried on in the separate departmental buildings of Anatomy, Physiology, Biochemistry, and Pathology and Bacteriology situated on the University Campus in Berkeley. The present laboratory buildings are regarded as temporary, but are spacious and easily increased in size to meet growing demands; they are fully equipped not only for teaching but for research.

Instruction in pathology in its more practical relations to clinical medicine is pursued during the third and fourth year courses. Clinical Pathology is taught in the second half of the second year. This year a new students' laboratory will be equipped in one of the existing buildings.

#### THE UNIVERSITY HOSPITAL

The University Hospital is essentially a teaching hospital under the control of the Board of Regents of the University of California. The medical affairs of the hospital are in charge of a committee composed of the heads of the various clinical departments, the Department of Pathology, the Director of the Hooper Foundation, and the Superintendent of the hospital. This arrangement secures the most thorough utilization of the patients for the purpose of instruction and research.

Several endowment funds and the support of the University make free beds available for the study of interesting and unusual cases. The Associated Charities of San Francisco send to the hospital a number of deserving patients. Clinical material also is drawn from distant points. It is aimed to make this hospital a consulting place, to a great extent, for physicians of the State, a place where patients unable to pay for costly examinations or expert opinion may be sent for further investigation, returning to their own physicians with a report of the findings.

The new hospital building, erected and equipped by friends of the University at a cost of about \$750,000, will be occupied in January, 1917. It is located on Parnassus avenue, between Third and Fourth avenues, directly adjoining the Medical School. The site overlooks Golden Gate Park, the Presidio of San Francisco, San Francisco Bay, and the Pacific Ocean.

The hospital has a capacity of 220 beds, of which 50 are assigned to each of the following services, viz.: medicine, surgery, women's, and pediatrics. These different divisions are separated into distinct units, each pavilion extending back from the upper two floors of the main hospital building.

The main building is seven stories in height and extends along the entire Parnassus avenue frontage.

The floors are devoted respectively (1) to engine room, power plant, laundry and storage accommodations; (2) to kitchens, dining-rooms, laundry and receiving department for ambulance patients; (3) the main or administrative floor, to students' lobby, and students' recreation room. At the extreme western end of this floor are quarters for the house staff; on this floor also are the offices of the department chiefs; (4) operating rooms and laboratories; (5) actinography, photography, drug department, and isolation department; (6 and 7) ward floors—these are divided into separate units from east to west: (a) medicine, (b) surgery, (c) women's,



(d) children's. Each ward unit is provided with its own teaching-room and laboratory.

As the investigation of obscure diseases and the instruction of medical students and post-graduates are two of the chief aims of the hospital, facilities for these purposes have been carefully provided.

There are four main operating rooms and two smaller operating rooms for use of the specialists. A separate entrance and lobby is provided for students. By this arrangement greater privacy is obtained for patients. This arrangement also possesses great advantages for the students as well as the staff.

Similarly throughout the hospital its efficiency as a teaching institution has been kept paramount. The construction is such that the capacity of the hospital may be doubled at comparatively small expense.

The present hospital contains 125 beds. Three wards on the second floor are devoted to medicine, surgery, and women's clinic. Accommodations are provided on the third floor for obstetrical patients and for children.

#### THE SAN FRANCISCO HOSPITAL

The new San Francisco Hospital has occupied its new buildings since July 1, 1915.

The present group consists of an executive building and sixteen large wards, with well arranged service rooms and clinical laboratories adjacent.

One wing contains the surgical unit, with six large operating rooms and the amphitheater, a well equipped Roentgen-ray department, and an emergency hospital. This latter will, during the coming year, serve as the main operative department for the city's Emergency Service, and will give unexcelled advantages to the interns and students in emergency surgical work.

The pathological building is now nearing completion. On the first floor there is a morgue room, with twenty-four De Camio mortuary slabs, so that bodies may be kept in refrigeration. Adjoining this is a large pavilion and amphitheater for post-mortem work and a series of rooms, kennels for research work, preparation rooms, etc. The second floor, when completed, will be used as the main chemical and biological laboratories of the Department of Public Health. Opportunity will be furnished here for interns to receive instruction in laboratory work, including the examination of milk, water, blood, toxicological specimens and preparation of vaccines.

The post-mortem material in the hospital is invaluable.

Ground has been broken for the new tuberculosis wards to accommodate 250 beds and for the isolation wing of 110 beds for infectious diseases.

The Medical School controls approximately 100 beds (exclusive of the tuberculosis wards). These are equally divided for instruction in clinical medicine, clinical surgery, and the specialties. Additional wards are used for the teaching of gynecology and obstetrics and pediatrics. The laboratories adjacent to the wards are fully equipped for the use of interns and students and the new laboratory building will give opportunity for special research.

#### OUT-PATIENT DEPARTMENT

The Out-Patient Department of the University Hospital provides facilities for instruction in all branches of clinical medicine and surgery. Diseases of every type are treated in the various clinics, each of which is under the supervision of a chief who is responsible for the instruction of the students.

During the third year and the first half of the fourth year groups of students are assigned to the clinics in medicine, surgery, woman's, pediatrics, dermatology, urology, ophthalmology, laryngology, orthopedic surgery, etc. In the last half of the fourth year students may elect to act as clinical clerks in some of the departments mentioned.

A large and varied clinical material is available and each year the growth of this department has been manifested by a continuous increase in the number of patients treated during the year. At present the daily average number of visits to the clinics is over 225. On account of this increase, clinics are being started in the afternoons to take care of the overflow. At these afternoon clinics in pediatrics fourth year students are assigned for definite clinical work. With this exception, all clinics are held simultaneously in the morning, so that patients may be referred from one clinic to another with great facility.

#### SOCIAL SERVICE DEPARTMENT

The Social Service Department has been thoroughly organized for the past two years. During 1915-16 there have been workers in the medical, woman's and children's clinics, and in addition voluntary assistance by students of the University has aided materially in carrying on the work of this department. The Social Service Department is in touch with all the various sources for medical care throughout the city, which very greatly facilitates the referring of cases to and from institutions and associations. A course for social service workers is being offered by the department in conjunction with the Department of Social Economics of the University. This work is under the direction of Dr. Louise Morrow, who is connected with the latter department as a lecturer and with the Medical School as assistant in pediatrics. An opportunity to study medical social service will be offered to students working in the Out-Patient Department.

**TUBERCULOSIS CLINICS**

The Department of Tuberculosis is under the charge of Dr. George H. Evans and is now maintained in conjunction with the San Francisco Society for the Study and Prevention of Tuberculosis. Upon the construction of an out-patient building this clinic will be established in conjunction with the Out-Patient Department of the University Hospital. Dr. Evans is also in charge of the University of California Medical School's service at the tuberculosis wards of the San Francisco Hospital. By this arrangement tuberculous patients of all types are available for investigation and teaching purposes.

**THE CANCER WARD**

Through the generosity of a friend of the Medical School a ward in the hospital is reserved for the treatment of patients suffering from malignant diseases. Advanced and inoperable cases are received, as well as those not too far advanced to be benefited by surgical or other treatment. Thus the variety of cases and the long residence of certain of them afford an unusual opportunity to observe all phases of malignant diseases.

**THE HOOPER FOUNDATION FOR MEDICAL RESEARCH**

The institution is located in a building adjacent to the hospital and its Director is also Professor of Research Medicine in the Medical School. A number of beds in the hospital are at the disposal of the Foundation and are occupied by patients suffering from diseases which at the moment are the subject of study and investigation by members of the Research Laboratory staff.

Professor Whipple and his associates offer elective courses to the medical students and a limited number of students may undertake research problems. The selection of such students will depend upon their fitness for this work. Opportunities also will be afforded graduates in medicine who wish to enter upon a career of research.

**TEACHING FACILITIES AT THE CHILDREN'S HOSPITAL**

An agreement with the Hospital for Children and Training School for Nurses adds a large amount of available teaching material. The children's medical, surgical, and orthopedic services have about seventy beds available for teaching purposes, and with the contagious pavilion the opportunities for instruction are very good. Opportunities for small sections to elect work in the Children's Hospital will be possible.

## ELECTIVE COURSES IN HOMEOPATHY

The Regents of the University have accepted the proposal of the Hahnemann Medical College of the Pacific to cease teaching medicine, provided elective courses in homeopathy are offered in the University of California Medical School. The following paragraphs give a short outline of the adopted scheme.

1. Beginning in August, 1915, all students matriculating in medicine must fulfill the requirements demanded by the University of California Medical School.

2. All students in the first two years will take all work in common except in *Materia Medica*. In this subject 32 hours of so-called "Regular" *Materia Medica* and 32 hours of Homeopathic *Materia Medica* will be given in the second half of the second year. Students may elect either one of these courses and hours of instruction are so arranged as to permit of election of both courses by all students who may so desire.

3. In the third and fourth years all students will take the same courses except in *Materia Medica* and Therapeutics and Clinical Medicine. Elective courses in these subjects will be offered so that students may choose whether they will take work under instructors of the so-called "Regular" or of the "Homeopathic" school. Instruction in Homeopathy will be in charge of two professors, a Professor of Homeopathic *Materia Medica* and a Professor of Applied Homeopathic Therapeutics.

## SCHOLARSHIPS

Through the generosity of Mrs. Frances B. Sanborn, one of the three scholarships known as the Sheffield Sanborn Scholarships has been assigned to the Medical School. This scholarship yields \$250 per annum at present and is open only to students who have not yet received the degree in medicine and who otherwise would not have the opportunity to acquire a university training.

The Willard Thompson Scholarship is open to students of the Medical School who are residents of Utah. This scholarship yields \$600 per annum.

Recently the alumni of the Medical School have established a scholarship known as the "William Watt Kerr Scholarship in Medicine." It yields \$400 per annum and is awarded to a worthy student of the Medical School.

Applications for these scholarships should be filed with the Recorder of the Faculties by March 15 of each year. A blank form of application may be obtained from the Recorder of the Faculties at Berkeley.

**HOSPITAL APPOINTMENTS**

Internships in the University Hospital are open to eleven graduates of the University of California Medical School or of some other approved medical school. Ten interns are assigned to the various clinical departments and one as pathological intern. Interns serve for one year, without salary. The appointments are made upon the recommendation of the Medical Board of the Hospital, which takes into account both the character of the work of the candidate throughout his entire career in the Medical School and also his general fitness.

Internships in the San Francisco Hospital also are awarded to six members of the graduating class. Positions in some of the private hospitals in San Francisco are filled annually either upon recommendation of the Medical Faculty or by competitive examination.

The Regents of the University have provided positions for residents in medicine, surgery, obstetrics and gynecology, and pediatrics, and assistant residents in surgery, gynecology and obstetrics and pediatrics at the University Hospital. These appointments, not necessarily limited to one year, are open to graduates in medicine who have had previous hospital experience and possess suitable qualifications for the work. The residents receive \$600 and the assistant resident \$300 a year and accommodations in the hospital.

The positions of House Physician and House Surgeon on the University of California Medical School service at the San Francisco Hospital have been established.

**PLAN OF INSTRUCTION AND  
ANNOUNCEMENT OF COURSES**



## PLAN OF INSTRUCTION

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### GENERAL STATEMENT

As in other departments of the University, instruction in the Medical School extends from the middle of August to the middle of May. The academic year is divided into half-years of sixteen weeks duration. The first half-year extends from August to the Christmas recess; the second from January to the close of the academic year.

The chief aim of the school is to develop medical practitioners and to offer facilities which will enable qualified students to prepare themselves for special medical work. The faculty is in sympathy with the principle which allows the student great freedom in choosing the direction his studies shall take. A system of instruction has been inaugurated which will permit wide choice in selecting the work of the last half of the fourth year.

The course of instruction is in harmony with the principles adopted by the Association of American Medical Colleges. Following the terminology employed by that association, the amount of work required in various subjects is indicated by the number of hours devoted to them. But in the case of the fundamental sciences—*anatomy, physiology, biological chemistry, pharmacology, pathology, and bacteriology*—the courses are also assigned a "unit" value such as other departments of this University employ. This expression is used since, under certain conditions, the subjects mentioned may be elected by non-medical students to fulfill the requirements for degrees other than the medical. In so far as the courses required for medical students are concerned, these units have no particular significance. The elective courses in these departments, however, may be taken by medical students in fulfilling requirements for a Master's degree, and the required courses may be counted in the combined course as fulfilling units for the A.B. degree, as well as part of the work for the M.D. degree.

In general, the University has adopted, as a standard, a unit of sixteen hours of didactic teaching, or forty-eight hours of laboratory work. The unit of demonstrative or clinical teaching occupies a middle ground of thirty-two hours. Thirty-two units represent the work of the average year. Exceptional students can carry two to four units more.



In general, the five years curriculum leading to the degree of Doctor of Medicine falls into four periods: first, that devoted to the fundamental medical sciences; second, that occupied by clinical instruction; third, the elective period; and fourth, the intern or laboratory year.

As the requirements for admission are such that the student enters after he has received training in physics, inorganic and organic chemistry, and biology, these subjects are not taught in the medical school. The first period of instruction covers three half-years and is devoted to anatomy, histology, physiology, biological chemistry, bacteriology, and pathology. Nearly all the work in these subjects is obligatory. They provide the basis for the study of clinical medicine; and the laboratory instruction which occupies the major portion of the student's time during this period is planned to develop powers of accurate observation.

Clinical instruction begins with the second half of the second year. The initial courses in medicine and surgery deal chiefly with the problems of diagnosis. They aim to train further the faculty of critical observation and to instill into the student good habits in taking case-histories and in carrying out systematically the examination of patients. In this half-year also materia medica, pharmacology, preventive medicine and hygiene, clinical pathology, ophthalmoscopy and elementary neurology, dermatology and obstetrics are taught.

Obligatory clinical instruction continues through the third year, and is given in the classroom, the clinical laboratory, the dispensary, and at the bedside. In the Out-Patient Department students take the histories of patients and make the necessary examinations under the direction of the attending staff. In the wards of the University Hospital and the San Francisco Hospital they are assigned cases for thorough study and have every opportunity to become familiar with therapeutic methods. In this year some of the major subjects are completed. During the first half of the fourth year the required work in medicine, surgery, gynecology, pediatrics and the various specialties are completed.

The elective period consists of the second half of the fourth year. All departments of the school offer optional work, and in general three possibilities are open to the student: (a) he may elect a number of short courses with a view to becoming a general practitioner; (b) he may select a few long courses looking toward a career in some special field of practice; (c) he may devote his time to the laboratories of the fundamental sciences for the purpose of training as a teacher and investigator.

# ARRANGEMENT OF STUDIES, 1916-17

## FIRST YEAR

<i>Subject</i>	<i>Total hours required</i>
First half-year:	
Histology .....	192
Anatomy .....	496
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	688
Second half-year:	
Neurology .....	80
Physiology .....	336
Biochemistry .....	272
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	688

## SECOND YEAR

<i>Subject</i>	<i>Total hours required</i>
First half-year:	
Topographical Anatomy .....	64
Morbid Anatomy and Histopathology .....	240
Bacteriology and Protozoology .....	170
Immunology .....	118
	<hr/>
	592

<i>Subject</i>	<i>Total hours required</i>
Second half-year:	
Preventive Medicine and Hygiene .....	16
Pharmacology .....	96
Materia Medica, etc. ....	32
General Medicine and Clinical Pathology .....	256
Neurology .....	16
Dermatology .....	16
General Surgery .....	112
Ophthalmoscopy .....	16
Obstetrics .....	32
	<hr/>
	592
Homeopathic Materia Medica (elective) .....	32

## THIRD YEAR

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
Preventive Medicine and Hygiene .....	16
Materia Medica, etc. ....	16
Therapeutics .....	32
General Medicine .....	128
Pediatrics .....	64
Neurology and Psychiatry .....	32
Legal Medicine .....	16
Dermatology .....	16
General Surgery .....	128
Ophthalmology .....	48
Laryngology etc. ....	16
Obstetrics .....	80
Pathological Demonstrations .....	32
	<hr/>
	624

<i>Subject</i>	<i>Total hours required</i>
<b>Second half-year:</b>	
Therapeutics .....	16
General Medicine .....	128
Pediatrics .....	32
Neurology and Psychiatry .....	64
Legal Medicine .....	16
Dermatology and Syphilis .....	32
General Surgery .....	128
Ophthalmology .....	16
Laryngology, etc. ....	32
Urology .....	16
Obstetrics .....	48
Gynecology .....	80
Pathological Demonstrations .....	32
	<hr/>
	640

**FOURTH YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
General Medicine .....	128
Pediatrics .....	80
Neurology .....	32
General Surgery .....	176
Orthopedic Surgery .....	48
Urology .....	48
Laryngology, etc. ....	32
Gynecology .....	32
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	576
<b>Second half-year:</b>	
Electives .....	560

## DEPARTMENTS OF INSTRUCTION

### ANATOMY

HERBERT MCLEAN EVANS, B.S., M.D., Professor of Anatomy.

ROBERT OETON MOODY, B.S., M.D., Associate Professor of Anatomy.

GEORGE W. CORNEE, A.B., M.D., Assistant Professor of Anatomy.

PHILIP E. SMITH, M.S., Ph.D., Instructor in Anatomy.

KATHERINE J. SCOTT, A.B., M.D., Instructor in Anatomy.

FELIX H. HURNI, B.S., Assistant in Anatomy.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

### MICROSCOPIC ANATOMY

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure cannot be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) for the purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology; (2) the transition from the macroscopic to the microscopic conditions is made with a dissecting microscope and teasing methods, free-hand or frozen sections; (3) the more detailed study

is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens.

**101. Histology and Microscopic Organology.**

Professor EVANS, Assistant Professor CORNER and Dr. SCOTT.

The course is given from the viewpoint of the activities of the living cell, the relation between structure and function being held uppermost. At the same time opportunity is afforded for a comprehensive review of human and comparative histology. Individual loan collections supplement the laboratory work.

First year, first half; 3 laboratory and 3 lecture periods a week. M W,  
8-12; F, 8-11; S, 11-12. 192 hours—6 units.

**102. General Human Anatomy.**

Assistant Professor CORNER.

A study of the human body. Demonstrations and laboratory study of prepared human dissections, models and microscopic slides. For students of the Public Health and Physical Education departments. Other non-medical students may be admitted by arrangement with instructor if size of class permit. Prerequisite: Zoology 1A or Physiology 1.

Second half-year. Demonstrations Tu Th, 9; laboratory W, 1-4.

**103. Organs of Special Sense and Neurology.**

Drs. SMITH and SCOTT and Mr. HURNI.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neuron studied in course 101 is used as the unit in the construction of the nervous system with a view of tracing origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to a consideration of the growth and development of the nervous system.

First year, second half; 2 lectures and 1 laboratory period a week.  
F, 8-9 and 1-5. 80 hours—3 units.

**105. Systematic Human Anatomy.**

Associate Professor MOODY, Dr. SMITH, and Mr. HURNI.

The systematic dissection of the human body. For convenience the work is divided into thirds or "parts," to-wit: Head and Neck, Arm and Thorax, Leg and Abdomen. To better facilitate instruction, students in the Medical School are required to finish each part in accordance with a prescribed time schedule.

First year, first half; Tu Th, 8-12; S, 8-11; M Tu W Th F, 1-5.  
496 hours—10 units.

**108. Regional and Topographical Anatomy.**

Associate Professor MOODY and Dr. SCOTT.

Living models, special dissections and sections of the body are used in this course to enable the student to become more familiar with structural relations and to assemble information obtained in preceding dissections. Students who are accepted for course 211 may substitute that course for this course.

Second year, first half. Section I, Tu, 8-9, F, 8-11; Section II, Tu, 9-10, W, 1-4. 64 hours—3 units.

**109. Anatomy for Physicians and Advanced Students.**

Professor EVANS and Associate Professor MOODY.

*Hours to be arranged to suit applicants.***ELECTIVES****209. Human Embryology.**

Professor EVANS.

Opportunity is offered for the study of specific problems in human embryology. The collections of both human and comparative embryological material are constantly being augmented. The elective is offered only to students familiar with vertebrate embryology.

*Hours to be arranged.***210. History of Anatomy.**

Assistant Professor CORNER.

Informal conferences upon the history and literature of anatomy and its relation to the progress of general medical knowledge, illustrated by old books and figures. Limited to six students, one hour weekly.

First year, first half.

*Hours to be arranged.***211. Original Investigation.**

Professor EVANS and other members of the staff.

Students and others who are prepared to undertake research in any of the anatomical sciences will be given facilities and encouragement by members of the staff. Time devoted by the majority of the second-year class to course 108 can be applied here by those specially qualified.

*Hours optional.***212. Seminar.**

Topics will be discussed by the staff and those electing the course. For the year 1916-17 topics will be chosen from the field of human and comparative embryology.

*Hours to be arranged.*

## PHYSIOLOGY

SAMUEL S. MAXWELL, Ph.D., Associate Professor of Physiology.

THEODORE C. BURNETT, M.D., Assistant Professor of Physiology.

ROSALIND WULZEN, Ph.D., Instructor in Physiology.

LILLIAN M. MOORE, M.S., Instructor in Physiology.

GEORGE H. MARTIN, A.B., Assistant in Physiology.

JOHN A. LARSON, A.B., Assistant in Physiology.

Physiology 104M is required. The remaining courses are open to those students who have the time and the preparation necessary to pursue them with profit.

The equipment in the Rudolph Spreckels Physiological Laboratory comprises, in addition to the apparatus and conveniences for the customary lines of work in mammalian physiology, ample facilities for research in general physiology and experimental biology. The department library contains complete sets of all the important physiological journals and the more important monographs on physiological and related subjects. The Herzstein Research Laboratory at New Monterey offers facilities for the investigation of problems in marine biology.

### 104M. Physiology.

Associate Professor MAXWELL and Assistant Professor BURNETT.

The physiology of nerve, muscle, central nervous system, sensation, circulation, respiration, and secretion. The lectures cover in a systematic way the general subject matter of the topics stated above. Laboratory experiments are so arranged that the most important fundamental observations are repeated. Attention is given to technique as well as to results. Continual use of the reference library is insisted upon. In addition to the routine work required alike of all students, each member of the class is required to demonstrate some special piece of experimental work; the demonstration is accompanied by a paper by another student on the subject which the demonstration illustrates, and each of the two hands in a carefully prepared bibliography. Thus each student is responsible for one demonstration, one paper, and two bibliographies.

First year, second half. Lectures and recitations, M Tu W Th S, 11-12, F, 10-11; laboratory, M Tu W Th S, 8-11.

336 hours—10 units.



## ELECTIVES

110. **Experimental Biology.**

Dr. WULZEN.

Special problems in cell physiology and the tropisms. Designed to give introductory training in methods of research. Open to properly qualified students.

*Hours and credits by arrangement.*

111. **Advanced Physiology.**

Associate Professor MAXWELL.

Some simple piece of research is repeated and extended in connection with a study of the original literature on the subject. Open to a few suitably prepared students.

First half-year. Laboratory three afternoons a week, with occasional lectures and conferences. 4 units.

212. **Research in Physiology.**

Associate Professor MAXWELL.

*Hours and subjects to be arranged.*

214. **Journal Club.**

The Department Staff.

Discussion of important advances in physiology, reports of research in the department, and abstracts of current papers. Open only to advanced students who have a reading knowledge of French and German. Application for membership should be made to Professor Maxwell.

Second year, first half. Tu, 5.

*1 unit.*

## BIOCHEMISTRY AND PHARMACOLOGY

T. BRAILSFORD ROBERTSON, Ph.D., Sc.D., Professor of Biochemistry.

HARDOLPH WASTENEYS, Ph.D., Associate Professor of Pharmacology.

\*CHARLES B. BENNETT, Ph.D., Instructor in Biochemistry.

EDWARD SIGFRID SUNDSTROM, M.D., Instructor in Biochemistry.

JOHN A. MARSHALL, M.S., D.D.S., Instructor in Biochemistry.

MARY DELPRATT, M.D., Assistant in Pharmacology.

The required courses are 101 and 102. The remaining courses are open to those students who have the time and the preparation necessary to pursue them with profit.

The equipment of the department affords ample opportunities for research. The types of investigation to which special attention has been given in recent years have been the following:

\* Absent on leave, 1916-17.

A. The physical chemistry of the proteins; particularly the physico-chemical behavior of protein solutions.

B. The analysis of blood-sera under varying physiological and pathological conditions; particularly the quantitative determination of the various protein fractions under conditions likely to be met with in clinical investigations or practice.

C. The kinetics of growth, particular attention having been paid to the study of the various substances which act as catalysors of the growth-process, and to the time relations of the growth of children and their relationship to environmental conditions.

In so far as the equipment and resources of the department admit, however, facilities are offered to any properly qualified person who desires to undertake a well-planned investigation in any field of biochemistry. Especial endeavor is made to provide every necessary facility for the carrying out of investigations having a bearing upon practical problems of medicine.

The joint library of the departments of Biochemistry and Physiology contains complete sets of all the important biochemical, pharmacological and physiological journals and the more important monographs on biochemical and related subjects. The Herzstein Research Laboratory at New Monterey offers facilities for the investigation of the biochemical problems presented by a varied and abundant marine fauna and flora.

#### **101M. Biochemistry.**

Professor ROBERTSON, Drs. SUNDSTROEM and MARSHALL.

In this course the foodstuffs are followed up from the moment that they are ingested to the moment when, after having circulated through the tissues and shared in their life, their final products are excreted from the body. The course may be considered as consisting of six parts, corresponding with various phases of the cycle of changes which the foodstuffs undergo. These divisions of the course are the following:

- (1) The foods; their properties, assimilation, and conversion into living matter or into reserve materials. The consideration of this phase of the subject takes the student to the point at which the foods have really become living matter or reserve materials. This leads naturally to the second part of the subject, namely:
- (2) The manner in which the physical and chemical properties of the foods determine the properties of living protoplasm.
- (3) The correlation of the different activities of the tissues in so far as this is brought about by chemical agents which are distributed through the agency of the circulation.

- (4) The chemical phenomena which accompany or underlie the performance of function by living tissues.
  - (5) The waste products, their chemical nature, their derivation, and, to some extent, the method of excretion.
  - (6) Regarding the entire body as a chemical machine, the efficiency of this machine is discussed and the relationship between the work it can perform and the nature of the fuel with which it is supplied.
- First year, second half. Lectures, M Tu W Th, 1-2, F, 10-11; laboratory, M Tu W Th, 2-5. *272 hours—9 units.*

#### 102M. Pharmacology.

Associate Professor WASTENEYS and Dr. DELPRATT.

The physiological action of drugs, with illustrations derived from their therapeutic application; experiments and demonstrations.

Second year, second half. M W, 3-4, F, 1-5. *96 hours—3 units.*

#### ELECTIVES

#### 110. Advanced Chemical Biology.

Professor ROBERTSON.

Special topics may be selected by the student in conference with Professor Robertson.

*Credit not to exceed 4 units.*

#### 210. Research in Biochemistry.

Professor ROBERTSON.

Open to qualified students who have the necessary time at their disposal. The subject and the time to be devoted to it to be arranged in conference with Professor Robertson.

#### 211. Research in Pharmacology.

Associate Professor WASTENEYS.

Open to qualified students who have the necessary time at their disposal. The subject and the time to be devoted to it to be arranged in conference with Professor Wasteneys.

## **PATHOLOGY AND BACTERIOLOGY**

\*FREDERICK P. GAY, A.B., M.D., Professor of Pathology.  
GLANVILLE Y. RUSK, A.B., M.D., Associate Professor of Pathology.  
†JEAN V. COOKE, A.B., M.D., Assistant Professor of Pathology.  
IVAN C. HALL, M.S., Assistant Professor of Bacteriology.  
GRACE F. GRIFFITHS, B.L., Instructor in Bacteriology.  
DOLORES E. BRADLEY, B.S., Assistant in Bacteriology.  
JOHN M. REHFISCH, M.D., Assistant in Pathology.  
RUTH L. STONE, M.S., Edith Claypole Research Assistant in Pathology.  
CARL L. A. SCHMIDT, Research Assistant in Pathology.

Instruction in pathology and bacteriology is given in the Hearst Laboratory of Pathology and Bacteriology, in Berkeley during the second year and at the University Hospital and the San Francisco Hospital during the third and fourth years.

The course in pathology aims to outline the natural history of disease. The instruction is for convenience divided into three correlated courses dealing respectively with causation, progress, and effect.

### **SECOND YEAR**

#### **101. Bacteriology and Protozoology.**

Assistant Professor HALL, Miss GRIFFITHS, and Miss BRADLEY.

Bacteriological methods are first taught; the preparation of culture media, the isolation of bacteria in pure culture, and the morphology and cultural characteristics of bacterial species. The pathogenic bacteria are then taken up in relation to specific diseases. The lower animal parasites concerned in systemic diseases are then considered. Lectures are employed for outlining general principles, the work being largely practical.

First half-year. M Tu Th F, 1-5. Alternating with course 102.

*170 hours—4 units.*

#### **102. Infection and Immunity.** Professor GAY and Miss GRIFFITHS.

The course presents the most accessible aspects of functional pathology.

It traces the evolution of infectious diseases in the body and the mechanism of animal defense. Experimental methods of studying infection are demonstrated and so far as practicable carried out by the student. A systematic course of lectures outlines the principles of immunology, with a consideration of their applicability in the diagnosis and treatment of disease.

First half-year. Lectures, M W, 11-12; laboratory, M Tu Th F, 1-5.

Alternating with course 101.

*118 hours—3 units.*

\* Absent on leave, first half-year, 1916-17.

† Absent on leave, second half-year, 1916-17.

**103. Morbid Anatomy and Histopathology.**

Associate Professor RUSK and Dr. REHFISCH.

The changes in organs and tissues in diseases in the animal and particularly in the human body are studied in this course. Macroscopic lesions are illustrated by fresh material from autopsies and museum specimens, and the microscopic appearances are studied by means of a loan collection of prepared slides. Experimental lesions are used to emphasize the evolution of such processes. The course includes systematic instruction in the conduct of autopsies at the Alameda County Hospital, at which the students assist in small groups. This course, while largely practical, is considered systematically in lectures and conferences.

First half-year. M W Th S, 8-11.

240 hours—6 units.

**THIRD YEAR****104. Autopsy Course and Demonstration of Autopsy Material.**

Assistant Professor COOKE.

During the school year over 100 autopsies are performed at the University Hospital and the University of California Service of the San Francisco Hospital. Provision is made for students of the third and fourth years to attend these autopsies. Members of the third-year class under the supervision of Professor Cooke perform the autopsies, correlate clinical and post-mortem findings, make gross descriptions of the lesions found and later describe the microscopic appearance of the tissues.

First and second half-years.

64 hours.

**ELECTIVES****201. Research: Problems of Infection and Immunity.** Professor GAY.*Hours and units to be arranged.***202. Research: Neuropathology.**

Associate Professor RUSK.

*Hours and units to be arranged.***203. Research: Bacteriology and Protozoology.**

Assistant Professor HALL.

The investigation of concrete problems suggested by the work in medical bacteriology.

*Hours and units to be arranged.*

**204. Advanced Morbid Anatomy and Histopathology.**

Assistant Professor COOKE.

An elective course for fourth year and graduate students in medicine, comprising autopsy technic and the working up of tissue and cultures resulting from post-mortem examinations.

Fourth year, second half. University Hospital.

*Hours and units to be arranged.*

**205. Seminar in Pathology.**

The Staff.

Reports and discussions of current advances and individual research in the field covered by the department. Open to medical students and graduate students.

Throughout the year, beginning September 14. Alternate Th, 8 p.m.

*No credit.*

**206. Experimental Pathology.**

Associate Professor RUSK and Dr. REHFISCH.

An elective course to which a limited number (not over six) especially qualified students will be admitted. Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alterations will be undertaken and the results demonstrated to those in Pathology 103, which latter course it is intended to supplement. Special problems may also be undertaken. This course may also be taken as a graduate course by special arrangement.

**PREVENTIVE MEDICINE AND HYGIENE**

WILBUR A. SAWYER, A.B., M.D., Clinical Professor of Preventive Medicine and Hygiene.

JAMES G. CUMMING, M.S., M.D., D.P.H., Assistant Clinical Professor of Preventive Medicine and Hygiene.

JOHN N. FORCE, Gr.P.H., M.S., M.D., Lecturer in Preventive Medicine and Hygiene.

WILLIAM C. HASSLER, Ph.G., M.D., Lecturer in Preventive Medicine and Hygiene.

CHESTER G. GILLESPIE, C.E., Lecturer in Preventive Medicine and Hygiene.

J. C. GEIGER, M.Ph., M.D., Lecturer in Preventive Medicine and Hygiene.

Lectures on the epidemiology and control of communicable diseases, the sanitation of water, milk and food supplies, sewage disposal, vital statistics, occupational diseases, public and personal hygiene, and public health administration.

## SECOND YEAR

## 101A. Lectures.

Professor SAWYER, Assistant Professor CUMMING, Drs. FORCE, HASSLER, GEIGER, and Mr. GILLESPIE.

Second half-year, once a week.

16 hours.

## THIRD YEAR

## 101B. Lectures.

A continuation of 101A.

First half-year, once a week.

16 hours.

For electives in this department see page 84.

## MATERIA MEDICA AND THERAPEUTICS

EUGENE S. KILGORE, B.S., M.D., Assistant Professor of Medicine.

ALBERT SCHNEIDER, Ph.D., M.D., Instructor in Materia Medica.

RENE BINE, M.D., Assistant in Medicine.

The work of this department is preceded by the courses in pharmacology and in infection and immunity, both of which furnish the student with fundamental ideas relating to preventive and curative medicine.

*Second Year.*—In the second half the course in materia medica consists of lectures, demonstrations and recitations on the sources, methods of preparation, and uses of drugs and biologic products, prescription writing, government control of drugs, etc.

*Third Year.*—In the first half the course in materia medica is completed and the course in therapeutics begun. The latter consists of lectures, recitations, demonstrations, and practical exercises. By the use of material in the wards and of case-histories stress is laid upon the application of therapeutic principles. Students are required to write specific directions for patients and for nurses and to execute many of the orders themselves. Comparatively few drugs are used. These occupy an important but by no means exclusive place in the teaching; and the primary emphasis is placed rather upon the other essentials of good treatment, such as regulation of diet, nursing, living conditions, and the securing of favorable mental attitude on the part of patients. Attention is given to biologic methods, to hydrotherapy, massage and other physical measures. Each student reports upon some therapeutic topic, either from a review of current literature or from personal observations in the wards; and one of the important objects of these reports is to reveal the conflicting state of therapeutic opinion and to impress upon students the necessity for conservatism in judging therapeutic claims.

SECOND YEAR

- 101A. Lectures and Demonstrations in *Materia Medica*. Dr. SCHNEIDER.  
Second half-year, twice a week. 32 hours.

THIRD YEAR

- 101B. Lectures and Demonstrations in *Materia Medica*. Dr. SCHNEIDER.  
A continuation of course 101.  
First half-year, once a week. 16 hours.

- 102A-102B. Lectures and Recitations in *Therapeutics*.  
Assistant Professor KILGORE.  
First half-year, twice a week; second half-year, once a week. 48 hours.

MEDICINE\*

- HERBERT C. MOFFITT, B.S., M.D., Professor of Medicine.  
WILLIAM WATT KERR, A.M., C.M., M.D., Clinical Professor of Medicine.  
WILLIAM BOERICKE, M.D., Clinical Professor of Homeopathic *Materia Medica*.  
GEORGE H. EVANS, M.D., Assistant Clinical Professor of Medicine.  
HERBERT W. ALLEN, B.S., M.D., Assistant Clinical Professor of Medicine.  
GEORGE E. EBRIGHT, M.D., Assistant Clinical Professor of Medicine.  
EUGENE S. KILGORE, B.S., M.D., Assistant Professor of Medicine.  
LEWIS S. MACE, A.B., M.D., Instructor in Medicine.  
LEROY H. BRIGGS, M.D., Instructor in Medicine.  
JAMES L. WHITNEY, A.B., M.D., Instructor in Medicine.  
JULE B. FRANKENHEIMER, B.S., M.D., Instructor in Medicine.  
RENE BINE, M.D., Assistant in Medicine.  
ELDRIDGE J. BEST, B.S., M.D., Assistant in Medicine.  
HANS LISSER, A.B., M.D., Assistant in Medicine.  
ERNEST H. FALCONER, C.M., M.D., Assistant in Medicine.  
LOVELL LANGSTROTH, A.B., M.D., Assistant in Medicine.  
JOSEPH H. CATTON, B.S., M.D., Assistant in Medicine.  
ESTHER ROSENCRANTZ, A.B., M.D., Assistant in Medicine.  
— —, Assistant in Medicine.  
— —, Assistant in Medicine.

Instruction is given both at the University Hospital and at the San Francisco Hospital.

*Second Year*.—Students begin their work in this department at the University Hospital during the second half of the second year. Two

\* The Department of Medicine includes Neurology and Dermatology.



general introductory courses bridge the gap between the fundamental sciences and clinical medicine. Stress is laid upon instruction in history taking and physical diagnosis, and an endeavor is made to drill the student thoroughly at the very beginning in what may be termed a standard medical technic. This uniform technic in history taking, in recording physical and laboratory examinations, will be applied in all the student's later dispensary and ward exercises and will be carried even further into his work as clinical clerk and intern.

Laboratory work is given in the laboratory belonging to the department at the Medical School. Students are taught to make chemical and microscopical examinations of blood, urine, sputum, stomach contents, feces, and of ascitic, pleural, and cerebrospinal fluids. Great stress will be laid upon the efficient performance of the various examinations by the individual student.

*Third Year.*—Throughout the year clinical lectures and demonstrations will be given the entire class twice a week. During the first half-year clinical exercises in small sections will be given at the University Hospital and during the second half-year at the San Francisco Hospital. During the second half-year lectures, demonstrations, and recitations will be given at the San Francisco Hospital by the medical staff.

*Fourth Year.*—During the first half-year clinical lectures and clinical ward work is continued at the San Francisco Hospital and clinical work in the tuberculosis wards is begun. Ward work is given to small sections at the University Hospital. In the second half of the fourth year elective work is offered both at the University and San Francisco hospitals.

## SECOND YEAR

### 101. Propedentics of Medicine.

Professor MOFFITT and Assistant Professor ALLEN.

Second half-year, twice a week.

32 hours.

### 102. Physical Diagnosis and History Taking.

Assistant Professor KILGORE, Drs. BRIGGS and WHITNEY.

Second half-year.

Each student, 96 hours.

### 103. Clinical Physiology.

Assistant Professor KILGORE.

Second half-year, twice a week.

32 hours.

### 104. Clinical Pathology.

Drs. HURWITZ and FALCONER.

Second half-year, twice a week.

96 hours.

### THIRD YEAR

- 105A-105B. **Clinical Medicine.** Professor MOFFITT.  
First and second half-years (U. C. H.), twice a week. 64 hours.
- 106A. **Clinical Medicine.** Professor KERR.  
Second half-year (S. F. H.), twice a week. 32 hours.
107. **Clinical Demonstrations and Recitations.** Assistant Professor EBRIGHT.  
Second half-year (S. F. H.), once a week. 16 hours.
- 108A. **Section Work at University Hospital.** Assistant Professor KILGORE, Drs. BRIGGS and WHITNEY.  
First half-year. Each student, 96 hours.
- 108B. **Section Work at San Francisco Hospital.** Assistant Professor EBRIGHT and Dr. FRANKENHEIMER.  
Second half-year. Each student, 48 hours.

### FOURTH YEAR

- 106B. **Clinical Lectures and Demonstrations.** Professor KERR.  
This is a continuation of course 106A.  
First half-year (S. F. H.), twice a week. 32 hours.
109. **Section Work at San Francisco Hospital.** Assistant Professors EVANS and EBRIGHT, Drs. MACE and FRANKENHEIMER.  
First half-year. Each student, 48 hours.
110. **Ward Work at University Hospital.** Dr. WHITNEY.  
First half-year. Each student, 48 hours.  
For electives in this department see pages 84-86.

### RESEARCH MEDICINE

#### THE GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH

- GEORGE H. WHIPPLE, A.B., M.D., Professor of Research Medicine.
- ERNEST L. WALKER, B.A.S., D.S., Associate Professor of Tropical Medicine.
- KARL F. MEYER, A.B., D.V.M., Associate Professor of Tropical Medicine.
- \*RUDOLPH A. KOCHER, A.B., M.D., Instructor in Research Medicine.
- SAMUEL H. HURWITZ, A.M., M.D., Instructor in Research Medicine.
- CHARLES W. HOOPER, A.B., M.D., Instructor in Research Medicine.
- ALICE RODRIGUEZ, B.S., M.D., Instructor in Research Medicine.
- WALTER C. ALVAREZ, M.D., Assistant in Research Medicine.
- WILLIAM J. KERR, B.S., M.D., Fellow in Research Medicine.
- MAJORIE G. FOSTER, M.A., Fellow in Research Medicine.

\* Absent on leave, 1916-17.

Facilities for work in Research Medicine are available during the entire year for those who have had the necessary training. The experimental work is open to students of the second, third, and fourth years of the Medical School, as well as graduates in medicine and advanced students who have had proper training.

The fundamental value of such work for the student lies in the training of the *method of research*. In this manner the student is given an opportunity to help in working out some small research problem and an insight into medical research can be gained in no other way.

Candidates for elective work in the Research Laboratory are expected to devote at least the time equivalent to a double course in this subject.

#### **201. Experimental Medicine.**

Professor WHIPPLE, Drs. HURWITZ and HOOPER.

Students who have had sufficient training will be given opportunity to work on some problem related to the research work of the laboratory staff. This work will be carried on under the personal supervision of the members of the laboratory staff and the student in reality will be treated as a voluntary assistant in Research Medicine.

*Hours to be arranged.*

#### **202. Research in Tropical Medicine.**

Associate Professors WALKER and MEYER.

Problems in protozoology, bacteriology, zoology, and immunity.

*Hours to be arranged.*

#### **203. Research on Applied Clinical Bacteriology and Immunology.**

Associate Professor MEYER.

This course is open to students or graduates who have taken Pathology 101 and 102 or equivalent.

*Hours to be arranged.*

#### **205. The Chemistry of Metabolism.**

Dr. RODÈ.

Laboratory training is offered in methods for the study of metabolism.

The student is given exercises in the quantitative estimation of rest-nitrogen, urea, ammonia, uric acid, and glucose in the blood; and in the determination of the total-nitrogen, urea, ammonia, uric acid, glucose, creatinin, etc., in the urine. Due consideration is given to the application of these methods to the investigation of pathological and physiological problems.

*Hours to be arranged.*

### CLINICAL NEUROLOGY AND PSYCHIATRY

MILTON B. LENNON, A.B., M.D., Instructor in Neurology, *in charge*.  
ROBERT L. RICHARDS, A.B., M.D., Lecturer in Psychiatry.  
V. H. PODSTAT, M.D., Lecturer in Psychiatry.  
RICHARD W. HARVEY, M.S., M.D., Instructor in Neurology.  
EVA C. REID, M.D., Assistant in Psychiatry.

The general plan of instruction in neurology follows the usual evolution of student teaching. The purely academic knowledge gained in the first year is gradually animated by clinical life and in the student there is developed the capacity to elicit symptoms, to measure their value and to draw logical conclusions from them.

Ample material is supplied for this course by the wards of the University Hospital, the University wards of the San Francisco Hospital, and particularly at the nerve clinic, to which over 6000 visits have been paid in the past year.

*Second Year.*—In the second half of the second year the knowledge of anatomy and physiology taught in the first half-year will be applied to clinical cases. The methods of history taking, of making routine neurologic examinations, and the main facts of general neurology will find their special place in this course.

*Third Year.*—Throughout this year there will be a systematic course in special neurology, which will be illustrated with an abundance of clinical material. In the second half-year students are assigned to cases and every opportunity is given for thorough work. In this year a systematic course of lectures on the more important mental diseases is also given.

*Fourth Year.*—The work in the first half of this year is mainly clinical. The students act as clinical assistants in the Out-Patient Department. In the second half work in this department is elective.

#### SECOND YEAR

101. *Elementary Clinical Neurology.*  
Second half-year, once a week.

Dr. HARVEY.  
16 hours.

#### THIRD YEAR

- 102A-102B. *Lectures and Demonstrations in Clinical Neurology.*

First and second half-years, once a week.

Dr. LENNON.  
32 hours.

**103A-103B. Clinical Lectures in Psychiatry.**

Drs. RICHARDS and PODSTAT.

First and second half-years, once a week.

*32 hours.***104. Section Work.**

Drs. LENNON and HARVEY.

Second half-year.

*Each student, 32 hours.***FOURTH YEAR****105. Section Work.**

Drs. LENNON, HARVEY, and REID.

First half-year.

*Each student, 32 hours.*

For electives in this department see page 86.

**DERMATOLOGY AND SYPHILOLOGY**

HOWARD MORROW, M.D., Clinical Professor of Dermatology.

L. S. SCHMITT, B.S., M.D., Instructor in Dermatology.

A. W. LEE, M.D., Instructor in Dermatology.

F. H. ZUMWALT, M.D., Assistant in Dermatology.

BERTRAM STONE, M.D., Assistant in Dermatology.

J. H. D. ROGER, M.D., Voluntary Assistant in Dermatology.

Instruction in this department is carried on during the last half of the second year and throughout the third year.

*Second Year.*—In the second half of this year a course in clinical lectures and demonstrations is intended to teach the student to observe objective symptoms and describe them correctly. The common diseases of the skin will be demonstrated.

*Third Year.*—Throughout this year a systematic course will cover the histopathology, diagnosis, and treatment of diseases of the skin. Students are taken to the Isolation Hospital, where leprosy and the exanthemata are demonstrated.

In the second half of this year a course of lectures and recitations will cover syphilis in all its phases. The clinical and laboratory procedures used in its diagnosis will also be discussed.

*Fourth Year.*—In the second half work in this department is elective.

**SECOND YEAR****101. Clinical Lectures and Recitations.**

Professor MORROW.

Second half-year, once a week.

*16 hours.*

**THIRD YEAR**

- 102A-102B. **Clinical Lectures and Demonstrations.** Professor MORROW.  
First and second half-years, once a week. 32 hours.
103. **Syphilology; Lectures and Recitations.** Dr. SCHMITT.  
Second half-year, once a week. 16 hours.  
For electives in this department see page 86.

**LEGAL MEDICINE**

A. A. D'ANCONA, A.B., M.D., Lecturer in Forensic Medicine.

*Third Year.*—In this department students receive instruction in the legal aspects of medicine. In general the course covers the following subjects: (1) technique of medico-legal post-mortem examinations; (2) toxicology from the chemical and legal points of view; (3) biological aspects; (4) legal regulation of medical practice, rules of evidence, etc. In order to set forth the various points of view of this subject, this course is given by several lecturers.

**THIRD YEAR**

- 101A-101B. **Lectures.**  
First and second half-years, once a week. 32 hours.

**PEDIATRICS**

WILLIAM PALMER LUCAS, A.B., M.D., Professor of Pediatrics.  
RACHEL L. ASH, B.S., M.D., Instructor in Pediatrics.  
OLGA BRIDGMAN, Ph.D., M.D., Instructor in Pediatrics.  
VIVIA BELLE APPLETON, A.B., M.D., Instructor in Pediatrics.  
ELLEN S. STADTMULLER, A.B., M.D., Assistant in Pediatrics.  
LOUISE MORROW, A.B., M.D., Head of Social Service Department and  
Lecturer in Medical Social Economics.  
ETHEL M. WATTERS, A.B., M.D., Assistant in Pediatrics.  
LINTON GIRDINE, B.S., M.D., Assistant in Pediatrics.  
CLAIN F. GELSTON, M.S., M.D., Assistant in Pediatrics.  
MABEL F. GIFFORD, Assistant in Pediatrics, in charge of Speech Defect  
Clinic.  
E. CHARLES FLEISCHNER, M.D., Voluntary Assistant in Pediatrics.  
SHERMAN A. WHITE, D.D.S., Voluntary Assistant in Pediatrics.  
ETHEL S. VALENTINE, Voluntary Assistant in Pediatrics.

The work in this department extends throughout the third year and the first half of the fourth year. The course consists of lectures, clinical exercises, and laboratory work.

The teaching material of the department is drawn from the following sources:

(1) The nursery and children's wards of the University Hospital, which give opportunities for studying normal breast feeding, the problems entering into the first two weeks of life and the diseases of infancy and childhood admitted into the general children's wards. (2) The Out-Patient Department of the University Hospital offers special opportunities for following normal feeding cases in the special feeding clinic and various ambulatory diseases of infancy and childhood only to be found in a large children's clinic. (The Children's Out-Patient Department had a total of 9301 visits during the last year, which gave a large amount of most interesting material.) Home visits are made where the home conditions are of importance or the patient's condition indicates it. (3) The medical wards of the Children's Hospital. (4) The children's ward of the San Francisco Hospital during ten weeks of the first half-year. (5) The Isolation Hospital, where every variety of contagious disease can be demonstrated. (6) Those desiring and qualified can take special work at various institutions, such as the Juvenile Court, the State Home for Feeble Minded at Eldridge, and other institutions doing child-welfare work.

During the year a series of lectures will be given on subjects closely related to pediatrics and child-welfare work by specialists in their particular fields. During the year 1915-16 the following subjects were covered:

Dr. E. CHARLES FLEISCHNER—Series of five lectures on the home problems of a physician: Feeding, Pneumonia, Contagious and Infectious Diseases.

Professor JESSICA PEIXOTTO—The Social Economic Problem of Child Welfare, especially in California.

Mr. EDWARD B. DE GEBOOT—The School Recreation Problem with special relation to the Health of the Child.

Miss KATHERINE FELTON—Organized Charity in Child Welfare: Child Placing.

*Third Year.*—The work is divided into lectures and clinical exercises dealing with prenatal studies, normal development of the infant, normal breast feeding, substitute feeding, the physiology and metabolism of infancy and childhood. The various diseases of infancy and childhood are demonstrated as far as the clinical material will permit. Laboratory exercises relating to physiology and digestion and preparation of milk formulas are taken up, either during the required or elective courses.

Especial attention is given to the psychological, sociological, and preventive problems of infancy and childhood. The problems of the defective, delinquent, and psychopathic child and of adolescence are studied in conjunction with the departments of Psychology and Social Economics. Through close co-operation with these departments special lines of work are offered both in psychology and social economics. These departments furnish lecturers and assistants on special topics relating to childhood. Through co-operation with child-welfare institutions of the state and city opportunity to study these institutions is given.

*Fourth Year.*—During the first half-year classes are divided into small sections for work in the Out-Patient Department and wards of the University Hospital, Children's Hospital, and in the San Francisco Hospital during the ten weeks of pediatric service. During the last half-year work in this department is elective.

#### THIRD YEAR

**101. Lectures, Recitations, Laboratory Work, and Clinical Demonstrations.**

Professor LUCAS and Staff.

First half-year, twice a week.

*64 hours.*

**102. Section Work.**

Professor LUCAS and Staff.

Second half-year.

*Each student, 32 hours.*

#### FOURTH YEAR

**103. Section and Ward Work.**

Professor LUCAS and Staff.

First half-year.

*Each student, 80 hours.*

For electives in this department see page 87.



## SURGERY\*

WALLACE I. TERRY, B.S., M.D., Professor of Surgery.  
HAROLD BRUNN, M.D., Assistant Clinical Professor of Surgery.  
SAXTON T. POPE, M.D., Assistant Clinical Professor of Surgery.  
HOWARD C. NAFFZIGER, M.S., M.D., Instructor in Surgery.  
HERBERT S. THOMSON, B.S., M.D., Instructor in Surgery.  
JEAN PAUL PRATT, A.B., M.D., Instructor in Surgery.  
LOUIS P. HOWE, M.D., Instructor in Surgery.  
HOWARD E. RUGGLES, A.B., M.D., Instructor in Surgery.  
ALANSON WEEKS, M.D., Instructor in Surgery.  
FAYETTE W. BIRTCH, A.B., M.D., Instructor in Surgery.  
DUDLEY TAIT, B.S., M.D., Assistant in Surgery.  
MARY E. BOTSFORD, M.D., Assistant in Surgery.  
CARL L. HOAG, M.S., M.D., Assistant in Surgery.  
EDNA L. BARNEY, M.S., M.D., Assistant in Surgery.  
JOHN H. WOOLSEY, M.S., M.D., Assistant in Surgery.  
IRWIN H. BETTS, B.S., M.D., Assistant in Surgery.

*Second Year.*—Instruction in surgery begins in the second half of the second year. This part of the course is aimed to give the student a broad view of the subject, to instill principles of surgical technic and to establish a foundation by means of a course in surgical pathology. The work of this half-year is carried on at the University Hospital and in the Out-Patient Department.

*Third Year.*—During this year systematic courses of lectures and recitations are begun. In this year there is also a course in surgical neurology, having special reference to the physiology and diagnosis of surgical diseases of the nervous system. In the second half-year there are lectures and demonstrations in the physiology of respiration and circulation as related to surgery, the study of shock, and the effect of anesthetics. At the San Francisco Hospital a conference course is carried on, in which the etiology, diagnosis, prognosis, pathology and treatment of surgical cases are discussed. The class is also divided into sections for work at the University and San Francisco hospitals.

*Fourth Year.*—During the first half of the fourth year the systematic lectures in surgery are continued, as well as the clinical work at the San Francisco Hospital. In addition students will act as ward clerks in the wards of the University and San Francisco hospitals. The work of the second half of the fourth year is elective.

\* The Department of Surgery includes Orthopedic Surgery, Urology, Laryngology, Ophthalmology and Roentgenology.

SECOND YEAR

101. **Elementary Surgery: Lectures, Demonstrations, and Recitations.**  
Professor TERRY and Dr. HOAG.  
Second half-year, twice a week. 32 hours.
102. **Surgical Technic.** Assistant Professor POPE.  
Second half-year, once a week. 16 hours.
103. **Surgical Pathology.** Dr. PRATT.  
Second half-year, twice a week. 32 hours.
104. **Section Work.** Assistant Professor POPE and Dr. THOMSON.  
Second half-year. Each student, 32 hours.

THIRD YEAR

- 105A-105B. **Surgical Lectures, Demonstrations, and Recitations.**  
Professor TERRY.  
First and second half-years, twice a week. 64 hours.
- 106A. **Clinical Demonstrations.** Assistant Professor BRUNN.  
Second half-year (S. F. H.), once a week. 16 hours.
107. **Surgical Physiology.** Assistant Professor POPE.  
Second half-year, once a week. 16 hours.
- 108A-108B. **Surgical Recitations.**  
Assistant Professor POPE and Dr. NAFFZIGER.  
First and second half-years, once a week. 32 hours.
109. **Neurological Surgery.** Dr. NAFFZIGER.  
First half-year, once a week. 16 hours.
- 110A. **Section Work at University Hospital.** Drs. THOMSON and PRATT.  
First half-year. Each student, 64 hours.
- 110B. **Section Work at San Francisco Hospital.**  
Assistant Professor BRUNN, Drs. NAFFZIGER and HOWE.  
Second half-year. Each student, 48 hours.

FOURTH YEAR

111. **Surgical Lectures, Demonstrations, and Recitations.**  
Professor TERRY.  
A continuation of course 105A-105B.  
First half-year, twice a week. 32 hours.

- 106B. Clinical Demonstrations.** Assistant Professor BRUNN.  
 A continuation of course 106A.  
 First half-year (S. F. H.), twice a week. *38 hours.*
- 112. Section Work.**  
 Assistant Professor BRUNN, Drs. NAFFZIGER and HOWE.  
 First half-year (S. F. H.). *Each student, 48 hours.*
- 113. Surgical Wards.** Dr. BIRTCH.  
 First half-year (U. C. H.). *Each student, 48 hours.*
- 114. Roentgenology.** Dr. RUGGLES.  
 First half-year (U. C. H.), once a week. *16 hours.*  
 For electives in this department see pages 87, 88, and 89.

### ORTHOPEDIC SURGERY

WALTER I. BALDWIN, B.S., M.D., Instructor in Orthopedic Surgery, *in charge.*  
 HOWARD H. MARKEL, A.B., M.D., Assistant in Orthopedic Surgery.  
 ROY C. ABBOTT, M.D., Assistant in Orthopedic Surgery.  
 THOMAS A. STODDARD, B.S., M.D., Voluntary Assistant in Orthopedic Surgery.  
 HAROLD W. WRIGHT, M.D., Voluntary Assistant in Orthopedic Surgery.  
 ARTHUR LAWRENCE FISHER, A.B., M.D., Voluntary Assistant in Orthopedic Surgery.

*Fourth Year.*—The required work in this department is given in the first half of the fourth year. The work of the second half of the fourth year is elective. Instruction consists of lectures, clinical demonstrations, and section work in the wards and Out-Patient Department of the University Hospital and in the Children's Hospital.

### FOURTH YEAR

- 101. Lectures and Clinical Demonstrations.** Dr. BALDWIN  
 First half-year, once a week. *16 hours.*
- 102. Section Work.** Dr. BALDWIN.  
 First half-year. *Each student, 38 hours.*  
 For electives in this department see page 88.

### LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY

- ALBERT J. HOUSTON, B.L., M.D., Assistant Clinical Professor of Laryngology, Otology and Rhinology.
- FREDERICK C. LEWITT, B.S., M.D., Assistant in Laryngology, Otology and Rhinology.
- ABEL W. JOHNSON, A.M., M.D., Assistant in Laryngology, Otology and Rhinology.
- HANS B. CHRISTIANSEN, M.D., Assistant in Laryngology, Otology and Rhinology.
- JEROME B. THOMAS, A.B., M.D., Assistant in Laryngology, Otology and Rhinology.
- FRANCIS M. SHOOK, M.D., Voluntary Assistant in Laryngology, Otology and Rhinology.

The required work of this department is given in the third year and in the first half of the fourth year.

*Third Year.*—During the first half-year lectures are given intended only to give continuity to the clinical work. During the second half-year the major portion of this work is practical and is carried on in association with regular clinics in the Out-Patient Department of the University Hospital. The use of the various instruments is also taught.

*Fourth Year.*—During the first half-year students are assigned to the clinic in small sections. The work in the second half of the fourth year is elective.

#### THIRD YEAR

- |                               |                              |
|-------------------------------|------------------------------|
| 101. Clinical Lectures.       | Assistant Professor HOUSTON. |
| First half-year, once a week. | 16 hours.                    |
| 102. Section Work.            | Assistant Professor HOUSTON. |
| Second half-year.             | Each student, 32 hours.      |

#### FOURTH YEAR

- |   |                              |
|---|------------------------------|
| 103. Section Work.                            | Assistant Professor HOUSTON. |
| First half-year.                              | Each student, 32 hours.      |
| For electives in this department see page 88. |                              |

## OPHTHALMOLOGY

WALTER SCOTT FRANKLIN, M.D., Assistant Clinical Professor of Ophthalmology.

WILLIAM F. BLAKE, A.B., M.D., Instructor in Ophthalmology.

EDWARD F. GLASER, M.D., Instructor in Ophthalmology.

RODERIC O'CONNOR, M.D., Assistant in Ophthalmology.

FRANK B. EATON, M.D., Assistant in Ophthalmology.

Instruction is given in this department in the second half of the second year and throughout the third year.

*Second Year.*—In the second half-year the class is divided into small sections for the purpose of instruction in the use of the ophthalmoscope.

*Third Year.*—Throughout this year a systematic course of lectures and recitations is given, covering the more common diseases of the lids and globes. In the first half of this year the class is divided into sections for work in the Out-Patient Department.

*Fourth Year.*—Work in this department in the second half of the fourth year is elective.

## SECOND YEAR

101. **Ophthalmoscopy.** Assistant Professor FRANKLIN and Dr. GLASER.  
Second half-year. *Each student, 16 hours.*

## THIRD YEAR

- 102A-102B. **Lectures and Recitations.** Assistant Professor FRANKLIN.  
First and second half-years, once a week. *32 hours.*

103. **Section Work.** Assistant Professor FRANKLIN and Dr. GLASER.  
First half-year. *Each student, 32 hours.*  
For electives in this department see page 88.

## UROLOGY

FRANK HINMAN, A.B., M.D., Instructor in Urology, *in charge.*

WILLIAM P. WILLARD, M.D., Instructor in Urology.

JOHN VAUGHAN LEONARD, M.D., Instructor in Urology.

JOHN FLOYD PRUETT, A.B., M.D., Assistant in Urology.

HARRY PARTRIDGE, M.D., Voluntary Assistant in Urology.

Instruction in this department is given in the last half of the third year and in the first half of the fourth year, and consists of lectures, recitations, and instruction in the Out-Patient Department.

*Third Year.*—During the last half of the year a course of lectures and recitations deals with the anatomy, physiology and pathology of the genito-urinary tract.

*Fourth Year.*—During the first half-year practical demonstrations of operative and clinic material of the hospital and Out-Patient Department is given. Students will also serve as assistants in the Out-Patient Department.

The work of the last half-year is elective.

#### THIRD YEAR

**101. Lectures and Recitations in Urology.**

Second half-year, once a week.

Dr. HINMAN.

16 hours.

#### FOURTH YEAR

**102. Genito-Urinary Clinic.**

First half-year, once a week.

Dr. HINMAN.

16 hours.

**103. Section Work.**

First half-year.

The Staff.

Each student, 32 hours.

For electives in this department see page 88.

#### OBSTETRICS AND GYNECOLOGY

FRANK W. LYNCH, A.B., M.D., Professor of Obstetrics and Gynecology.

R. KNIGHT SMITH, M.D., Assistant Clinical Professor of Obstetrics.

J. CRAIG NEEL, Ph.B., M.D., Instructor in Obstetrics and Gynecology.

WILLIAM G. MOORE, M.D., Instructor in Obstetrics and Gynecology.

LOUIS I. BREITSTEIN, B.S., M.D., Instructor in Obstetrics and Gynecology.

EDWARD TOPHAM, M.D., Assistant in Obstetrics and Gynecology.

L. A. EMGE, M.D., Assistant in Obstetrics and Gynecology.

ALICE F. MAXWELL, B.S., M.D., Assistant in Obstetrics and Gynecology.

Instruction in this department is given to students of the second, third, and fourth years. The work of the second and third years and first half of the fourth year is obligatory. The required courses include lectures, recitations, laboratory demonstrations, and practical work in the wards and Out-Patient Department in obstetrics and gynecology. Each student must attend at least twelve cases of confinement.

*Second Year.*—The work of the second year is introductory and includes the study of the normal anatomy and physiology of the female generative organs.

*Third Year.*—Normal pregnancy, labor, and the puerperium are considered during the first half of the third year, following which the courses deal on one hand with obstetrical complications and on the other hand with gynecological diseases.

The woman's clinic of the University Hospital has fifty beds for obstetric and gynecologic patients and thus offers a splendid opportunity for combining clinical instruction in these subjects and for demonstrating the close relationship which exists between them. Other clinical opportunities are afforded by the obstetrical and gynecological service at the San Francisco Hospital.

*Fourth Year.*—The work of the second half of the fourth year is elective.

#### SECOND YEAR

##### 101. Introductory Lectures.

Professor LYNCH.

Second half-year, twice a week.

32 hours.

#### THIRD YEAR

##### 102A-102B. Lectures and Recitations in Obstetrics.

Professors LYNCH and SMITH, Drs. NEEL and BREITSTEIN.

First half-year, five times a week.

80 hours.

Second half-year, twice a week.

48 hours.

##### 103. Gynecological Pathology.

Dr. NEEL.

Second half-year, once a week.

32 hours.

##### 104. Lectures and Recitations in Gynecology.

Professor LYNCH, Drs. NEEL and MOORE.

Second half-year, three times a week.

48 hours.

#### FOURTH YEAR

##### 109. Section Work in Gynecology.

Dr. NEEL.

First half-year.

Each student, 32 hours.

For electives in this department see page 89.

## FOURTH-YEAR ELECTIVES

The last half of the fourth year has been set aside for electives. *A minimum of 560 hours is demanded.* Electives are arranged as double courses and single courses. A *double course* occupies the entire day for one month or forenoons or afternoons for two months, and has a value of 140 hours. A *single course* occupies a half day for one month and has a value of 70 hours.

Students who desire to specialize in any major branch of medical study may elect more than one of the courses offered in a given subject, but no student will be allowed to devote his whole elective period to one subject without special permission of the Advisory Board of the Faculty and the consent of the head of the department concerned.

Students electing research work which necessarily is prolonged beyond the time designated for that subject will be permitted to finish it provided the time required does not extend beyond the half-year. The permission of the Advisory Board of the Faculty will be necessary to carry out this arrangement.

The final choice of electives must be left at the Secretary's office on or before December 1, 1916. No changes will be allowed after the final arrangement is made. The time allotted for electives, together with the schedule thereof, must be determined by the Secretary of the Medical School, and the Faculty reserves the right to make any changes deemed necessary in the selection and arrangement of the courses chosen by the student.

Examinations will be held at the end of each course, for the most part practical, and the grade assigned to each student will be sent to the Secretary's office as soon as the course has terminated.

The value of the courses, as stated above, when elected in anatomy, physiology, biochemistry, pathology and bacteriology, or research medicine, must depend on arrangement with the heads of the departments concerned.

## ANATOMY

## 209. Human Embryology.

Professor EVANS.

Opportunity is offered for the study of specific problems in human embryology. The collections of both human and comparative embryological material are constantly being augmented. The elective is offered only to students familiar with vertebrate embryology.

*Hours to be arranged.*



**210. History of Anatomy.**

Assistant Professor CORNER.

Informal conferences upon the history and literature of anatomy and its relation to the progress of general medical knowledge, illustrated by old books and figures. Limited to six students, one hour weekly.

*Hours to be arranged.***211. Original Investigation.**

Professor EVANS and other members of the staff.

Students and others who are prepared to undertake research in any of the anatomical sciences will be given facilities and encouragement by members of the staff.

*Hours optional.***212. Seminar.**

Topics will be discussed by the staff and those electing the course. For the year 1916-17 topics will be chosen from the field of human and comparative embryology.

*Hours to be arranged.***PHYSIOLOGY****110. Experimental Biology.**

Dr. WULZEN.

Special problems in cell physiology and the tropisms. Designed to give introductory training in methods of research.

*Hours to be arranged.***111. Advanced Physiology.**

Associate Professor MAXWELL.

Some simple piece of research is repeated and extended in connection with a study of the original literature on the subject.

**212. Research in Physiology.**

Associate Professor MAXWELL.

*Hours and subjects to be arranged.***214. Journal Club.**

The Department Staff.

Discussion of important advances in physiology, reports of research in the department, and abstracts of current papers. Open only to advanced students who have a reading knowledge of French and German. Applications for membership should be made to Professor Maxwell.

**BIOCHEMISTRY AND PHARMACOLOGY**

- 110. Advanced Chemical Biology.** Professor ROBERTSON.  
Special topics may be selected by the student in conference with Professor Robertson.
- 210. Research in Biochemistry.** Professor ROBERTSON.  
Open to qualified students who have the necessary time at their disposal. The subject and the time to be devoted to it, to be arranged in conference with Professor Robertson.
- 211. Research in Pharmacology.** Associate Professor WASTENEYS.  
Open to qualified students who have the necessary time at their disposal. The subject and the time to be devoted to it, to be arranged in conference with Professor Wasteneys.

**PATHOLOGY AND BACTERIOLOGY**

- 201. Research; Problems of Infection and Immunity.** Professor GAY.  
*Hours to be arranged.*
- 202. Research; Neuropathology.** Associate Professor RUSK.
- 203. Research; Bacteriology and Protozoology.** Assistant Professor HALL.  
The investigation of concrete problems suggested by the work in medical bacteriology.  
*Hours and units to be arranged.*
- 204. Advanced Morbid Anatomy and Histopathology.** Assistant Professor COOKE.  
An elective course for fourth-year and graduate students in medicine, comprising autopsy technic and the working up of tissues and cultures resulting from post-mortem examination. University Hospital.  
*Hours to be arranged.*
- 205. Seminar in Pathology.** The Staff.  
Reports and discussions of current advances and individual research in the field covered by the department. Open to medical students and graduate students.  
Throughout the year, beginning September 14. Alternate Th, 8 p.m.  
*No credit.*

**206. Experimental Pathology.**

Associate Professor **RUSK** and Dr. **REHFISCH**.

An elective course to which a limited number (not over six) especially qualified students will be admitted. Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alteration will be undertaken and the results demonstrated to those in Pathology 103, which latter course it is intended to supplement. Special problems may also be undertaken. This course may also be taken as a graduate course by special arrangement.

**PREVENTIVE MEDICINE AND HYGIENE****201. Preventive Medicine.**

By arrangement with the State Board of Health a limited number of properly qualified students will be given an opportunity to work as volunteer assistants in the Bureau of Communicable Diseases. The nature of the work will depend upon the kind of investigations which are being carried on at the time of the service. The work will include both laboratory and field service. A problem will be assigned to the student and a written report will be required. The problem will be one of the following:

- (a) A sanitary survey of a city or town.
- (b) The field and laboratory investigation of a public-health problem.
- (c) The investigation and control of an epidemic.

To derive the best benefit from the course the student should be prepared to pay traveling expenses.

Double course.

**MEDICINE****201. Clinical Medicine (U. C. H.).**

In the wards of the University Hospital opportunity will be offered four students to serve as clinical clerks. Their work will be under the supervision of Professor Moffitt.

Double course, mornings only; limited to four students.

**202. Clinical Medicine (S. F. H.).**

Students will act as clinical clerks in the wards of the San Francisco Hospital, under the supervision of a member of the department.

Single or double course.

**203. Clinical Medicine (O. P. D.).**

Students will act as clinical clerks in the Out-Patient Department of the University Hospital. Opportunity is also afforded a number of students to study the use of the polygraph and the electrocardiograph.

Single or double course, mornings only; limited to four students each month.

**204. Clinical Medicine (Wards, U. C. H.).**

Students will act as clinical clerks in the wards of the University Hospital. This work will be under the supervision of members of the department and will include such laboratory studies of the patients as are necessary.

Single or double course, afternoons only; limited to four students.

**205. Tuberculosis.**

This course will comprise individual teaching in the taking of histories, the correlation of symptomatology and physical signs, the differential diagnosis of pulmonary tuberculosis by means of physical examination, radiograms, and special laboratory technic. The treatment of tuberculosis and its complications will be considered with special reference to the modern development of specific therapy. The broader view of tuberculosis in reference to its economic and sociologic aspects will be given emphasis. This course will be offered in the tuberculosis wards of the San Francisco Hospital by Assistant Professor Evans. Students will also be instructed in special laboratory examinations of sputum, blood, exudates, etc., in connection with the clinical material of the wards.

Single or double course.

**206. Research in Clinical Medicine.**

Through the co-operation of the staff of the Hooper Foundation opportunity will be offered to two or three students to work on some research problem connected with the material of the medical wards.

Double course; limited to three students.

**207. Clinical Lectures.**

A series of clinical lectures on tumors will be offered by Professor Moffitt one hour a week, Saturday mornings.

**208. Advanced Work in Laboratory Diagnosis.**

Lectures and demonstrations including some of the more advanced methods of clinical examination which are beyond the scope of the required work in clinical pathology. A study will be made of the methods of testing the functional capacity of the kidneys, liver and pancreas, and the diagnostic value, interpretation and limitations of such tests will be discussed. The course will include also a consideration of the more useful methods of studying abnormalities in blood coagulation, particular emphasis being laid upon the differentiation of the various hemorrhagic diseases. Whenever possible illustrative cases will be shown. This course is offered by Dr. Hurwitz.

**NEUROLOGY AND PSYCHIATRY****201. Neurology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**202. Psychiatry.**

Instruction will be given in history taking, mental examination and psychanalysis, the correlation of physical signs and laboratory findings with the manifestations of mental disorders, the etiology, symptomatology, diagnosis and treatment of mental diseases.

Single or double course.

**DERMATOLOGY****201. Dermatology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants. Opportunity is also afforded for the preparation and examination of biopsies and for the study of the bacteriology of the skin.

Single or double course.

## PEDIATRICS

### 201. *Pediatrics.*

An elective course in pediatrics will be open to fourth-year students in the wards of the University and Children's hospitals and in the Out-Patient Department of the University Hospital. This course consists of case teaching, in which students will be expected to do all the work in connection with the patients assigned them. This includes doing the laboratory work, looking up all the available literature and keeping bedside records. Ward talks and demonstrations in the laboratory and special case-histories covering conditions not observed in the ward during the time the course is in progress will be given. Students electing double courses may be allowed to take special problems or to do work in special institutions. Not more than four students may elect work in the same institution during any one period. Those electing double courses will be given the preference.

Single or double course.

## SURGERY

### 201. *Surgery (U. C. H.).*

The students will act as clinical clerks in the wards and Out-Patient Department of the University Hospital. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited.

Single or double course.

### 202. *Surgery (S. F. H.).*

The students will act as clinical clerks in the wards of the San Francisco Hospital. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited.

Single or double course.

### 203. *Surgery.*

The students will devote their time to research in surgical physiology and pathology and to work in surgery of the peripheral and central nervous system. Operative surgery on the cadaver may also be included in this course. When not so occupied, students will act as clinical clerks in the wards of the University or San Francisco Hospital.

Single or double course.

**204. Surgical Pathology.**

A research course in subjects to be assigned under direction of Dr. Pratt.

Single course.

**205. Emergency Surgery.**

Students will act as clinical clerks in the emergency service at the San Francisco Hospital. Students electing this course must take a double course for the entire day.

Double course.

**ORTHOPEDIC SURGERY****201. Orthopedic Surgery.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**UROLOGY****201. Urology.**

This course consists of an advanced study of kidney diseases, including renal diagnosis and functional tests. Students also serve as assistants in the Out-Patient Department of the University Hospital and at the San Francisco Hospital, particular attention being paid to cystoscopy and ureteral catheterization.

Single or double course.

**202. Research in Urology.**

*Hours and subjects to be arranged.*

**OPHTHALMOLOGY****201. Ophthalmology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY****201. Laryngology, Otology and Rhinology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**ROENTGENOLOGY**

**201. Roentgenology.**

Students will be assigned to assist in technical work under the direction of Dr. Ruggles.

Single or double course.

**OBSTETRICS AND GYNECOLOGY**

**201. Obstetrics and Gynecology.**

A practical course including work in the Out-Patient Department, the wards, and the operating room. Students will act as clinical clerks in the wards and as assistants in the operating room.

Single or double course.

**202. Obstetrics and Gynecology.**

A practical course including work at the San Francisco Hospital. Students will act as clinical clerks in the wards and as assistants in the operating room.

Single or double course.





## **SCHEDULES AND LIST OF STUDENTS**



## **SCHEDULES, 1916-17**

**FIRST YEAR  
FIRST SEMESTER**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9						
9-10	Histology EVANS CORNER	Anatomy MOODY SMITH	Histology EVANS CORNER	Anatomy MOODY SMITH	Histology EVANS CORNER	Anatomy MOODY SMITH
10-11						
11-12						Histology Lecture EVANS
1-2						
2-3	Anatomy MOODY SMITH	Anatomy MOODY SMITH	Anatomy MOODY SMITH	Anatomy MOODY SMITH	Anatomy MOODY SMITH	
3-4						
4-5						

**FIRST YEAR  
SECOND SEMESTER**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9					Neurology Lecture SMITH	
9-10	Physiology Laboratory	Physiology Laboratory	Physiology Laboratory	Physiology Laboratory	Biochemistry Lecture ROBERTSON	Physiology Laboratory
10-11					Physiology Lecture BURNETT	
11-12	Physiology Lecture BURNETT	Physiology Lecture MAXWELL	Physiology Lecture MAXWELL	Physiology Lecture MAXWELL		Physiology Lecture MAXWELL
1-2	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON	Neurology Laboratory SMITH	
2-3						
3-4	Biochemistry Laboratory	Biochemistry Laboratory	Biochemistry Laboratory	Biochemistry Laboratory		
4-5						

**SECOND YEAR  
FIRST SEMESTER**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9		Topographical Anatomy MOODY SCOTT (Electives) EVANS	Morbid Anatomy and Histopathology RUSK	Morbid Anatomy and Histopathology RUSK	Topographical Anatomy MOODY SCOTT (Electives) EVANS	Morbid Anatomy and Histopathology RUSK
9-10	Morbid Anatomy and Histopathology RUSK					
10-11		Autopsy Section RUSK		Autopsy Section RUSK		
11-12	Immunology Lecture GAY		Immunology Lecture GAY			
1-2			Topographical Anatomy MOODY SCOTT (Electives) EVANS	Bacteriology and Immunology GAY HALL	Bacteriology and Immunology GAY HALL	
2-3	Bacteriology and Immunology GAY HALL	Bacteriology and Immunology GAY HALL				
3-4						
4-5						

**SECOND YEAR  
SECOND SEMESTER**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9						
9-10	Dermatology Lectures MORROW	Medicine MOFFITT	Elem. Surgery TERRY HOAG	Elem. Surgery TERRY	Phys. Diagnosis KILGORE	Surgical Technic POPE
10-11			Neurology LENNON			Preven. Medicine and Hygiene Lectures CUMMINGS
11-12	Section Work	Section Work	Medicine MOFFITT ALLEN	Section Work	Section Work	
12-1	Clinical Physiology KILGORE	Obstetrics Lectures and Recitations LYNCH	Clinical Physiology KILGORE	Obstetrics Lectures and Recitations LYNCH		Surg. Pathology PEATT
2-3	Surgical Pathology PEATT		Homeopathic Materia Medica (Elective) BOECKE		Pharmacology Laboratory (Berkeley)	
3-4	Pharmacology Lectures WASTENEYS	Clinical Pathology HURWITZ FALCONER	Pharmacology Lecture WASTENEYS	Clinical Pathology HURWITZ FALCONER		
4-5	Materia Medica Lectures and Demonstrations SCHNEIDER		Materia Medica Lectures and Demonstrations SCHNEIDER			
5-6	Homeopathic Materia Medica (Elective) BOECKE					



**THIRD YEAR  
FIRST SEMESTER**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Neurology Clinical Lectures LENNON	Laryngology Clinical Lectures HOUSTON	Surgery Lectures and Demonstrations TERRY		Surgery Recitations POPE NAFFIGER	Surgery Lectures and Demonstrations TERRY
9-10	Medicine Clinical Lectures MOFFITT		Dermatology Clinical Lectures MORROW	Neurological Surgery NAFFIGER	Medicine Clinical Lectures MOFFITT	Ophthalmology Clinical Lectures FRANKLIN
10-11						Preven. Medicine and Hygiene Lectures CUMMING
11-12	Section Work	Section Work	Section Work	Section Work	Section Work	Psychiatry Lectures PODSTATA
12-1		Obstetrics Lectures LYNOH	Materia Medica Lectures SCHNEIDER	Obstetrics Lectures LYNOH		Obstetrics Lectures LYNOH
2-3	Obstetrics Lectures LYNOH	Pediatrics Lectures and Demonstrations LUCAS		Pediatrics Lectures and Demonstrations LUCAS	Obstetrics Lectures LYNOH	
3-4	Therapeutics KILGORE				Therapeutics KILGORE	
4-5		Pathological Demonstrations COOKE		Pathological Demonstrations COOKE	Forensic Medicine D'ANCONA	

**THIRD YEAR  
SECOND SEMESTER**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Neurology Clinical Lectures LENNON	Medicine Lectures and Demonstrations S. F. H. KEER	Surgery Lectures and Demonstrations TERRY	Medicine Lectures and Demonstrations S. F. H. KEER	Surgery Recitations POPE NAFFIGER	Surgery Lectures and Demonstrations TERRY
9-10	Medicine Clinical Lectures MOFFITT	Surgery Clinical Demonstrations S. F. H. BRUNN	Dermatology Clinical Demonstrations MORROW	Medicine Clinical Demonstrations S. F. H. FREIGHT	Syphilology Lectures and Demonstrations SCHMITT	Ophthalmology Clinical Lectures FRANKLIN
10-11	Section Work	Section Work S. F. H.	Section Work	Section Work S. F. H.	Medicine Clinical Lectures MOFFITT	Surgical Physiology POPE
11-12					Section Work	Psychiatry Lectures RICHARDS
12-1	Gynecology Lectures LYNOH NEEL		Gynecology Lectures LYNOH NEEL			Urology Lectures and Demonstrations HINMAN
2-3	Gynecological Pathology NEEL	Therapeutics KILGORE	Obstetrics Lectures LYNOH	Gynecology Lectures LYNOH NEEL	Obstetrics Demonstrations BREITSTEIN	Forensic Medicine D'ANCONA
3-4		Pathological Demonstrations COOKE				
4-5						

**FOURTH YEAR  
FIRST SEMESTER**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Orthopedic Surgery Lectures and Demonstrations BALDWIN	Medicine Lectures and Demonstrations S. F. H. KEER	Surgery Lectures and Demonstrations TERRY	Medicine Lectures and Demonstrations S. F. H. KEER	Roentgenology RUGGLES	Surgery Lectures and Demonstrations TERRY
9-10		Surgery Clinical Demonstrations S. F. H. BRUNN	Urology Clinical Demonstrations HINMAN	Surgery Clinical Demonstrations S. F. H. BRUNN		
10-11						
11-12	Section Work U. O. H.	Section Work S. F. H.	Section Work U. O. H.	Section Work S. F. H.	Section Work U. O. H.	Section Work U. O. H.
12-1						
2-3	Ward Work	Ward Work		Ward Work	Ward Work	
3-4						
4-5						

DEGREES CONFERRED MAY, 1916

Mabel Florence Arrington, B.S. ....	East Northfield, Massachusetts
3700 California st, San Francisco.	
Elizabeth Worley Bailie, B.S. ....	Berkeley
1248 First av, San Francisco.	
William Edward Chamberlain, B.S. ....	Oakland
1200 Third av, San Francisco.	
Elton Ralph Charvoz .....	Santa Maria
804 Dolores st, San Francisco.	
Enos Paul Cook, B.S. ....	Oakland
1251 Second av, San Francisco.	
Dunnleigh Corey, B.S. ....	La Jolla
1251 Second av, San Francisco.	
Mary Craig, B.S. ....	Upland
3700 California st, San Francisco.	
Brython Parry Davis, B.S. ....	Weaverville
1277 First av, San Francisco.	
Thomas Balfour Mackie Dunn, B.S. ....	Santa Cruz
1251 Second av, San Francisco. *	
Orville Roscoe Goss, B.S. ....	Berkeley
1233 First av, San Francisco.	
Herold Pittman Hare, B.S. ....	Fresno
1251 Second av, San Francisco.	
Charles Daniel Holliger, M.S. ....	Indianapolis
458 Frederick st, San Francisco.	
Warren Douglas Horner, B.S. ....	Chico
1251 Second av, San Francisco.	
Maurice Josés, B.S. ....	Ione
1251 Second av, San Francisco.	
Frederick George Linde, B.S. ....	Auburn
1277 First av, San Francisco.	
Charles Pierre Louis Mathé .....	San Francisco
3367 Twenty-sixth st, San Francisco.	
Laird Monterey Morris .....	Berkeley
2229 Vine st, Berkeley.	
Myrl Morris, B.S. ....	Berkeley
2229 Vine st, Berkeley.	
Robert Reid Newell .....	Stockton
1457 Tenth av, San Francisco.	
Joseph Allen Owen, B.S. ....	Red Bluff
1420 Fifth av, San Francisco.	
Frank William Pinger .....	Berkeley
1251 Second av, San Francisco.	

Jacob Leroy Pritchard, M.S. ....	New Mexico
458 Frederick st, San Francisco.	
John Carroll Ruddock, M.S. ....	Ukiah
1277 First av, San Francisco.	
Margaret Schulze, M.S. ....	Berkeley
1731 Carlton st, Berkeley.	
Henry Hunt Searls, B.S. ....	Nevada City
64 Sixth av, San Francisco.	
Julius Sherman ....	San Francisco
Mt. Zion Hospital, San Francisco.	
Robert Stanton Sherman, M.S. ....	Newcastle
3367 Twenty-sixth st, San Francisco.	
William Ben Thompson, M.S. ....	South Pasadena
1251 Second av, San Francisco.	
Marshall Gould Williamson, B.S. ....	San Francisco
1631 Oak st, San Francisco.	

## STUDENTS, SESSION 1915-1916

(Corrected to May, 1916)

## FOURTH YEAR

Mabel Florence Arrington, B.S. ....	East Northfield, Massachusetts
3700 California st, San Francisco.	
Elizabeth Worley Bailie, B.S. ....	Berkeley
1248 First av, San Francisco.	
William Edward Chamberlain, B.S. ....	Oakland
1200 Third av, San Francisco.	
Elton Ralph Charvoz ....	Santa Maria
804 Dolores st, San Francisco.	
Enos Paul Cook, B.S. ....	Oakland
1251 Second av, San Francisco.	
Dunnleigh Corey, B.S. ....	La Jolla
1251 Second av, San Francisco.	
Mary Craig, B.S. ....	Upland
3700 California st, San Francisco.	
Brython Parry Davis, B.S. ....	Weaverville
1277 First av, San Francisco.	
Thomas Balfour Mackie Dunn, B.S. ....	Santa Cruz
1251 Second av, San Francisco.	
Orville Roscoe Goss, B.S. ....	Berkeley
1233 First av, San Francisco.	
Herold Pittman Hare, B.S. ....	Fresno
1251 Second av, San Francisco.	
Charles Daniel Holliger, M.S. ....	Indianapolis
458 Frederick st, San Francisco.	

Warren Douglas Horner, B.S. ....	Chico
1251 Second av, San Francisco.	
Maurice Jones, B.S. ....	Ione
1251 Second av, San Francisco.	
Frederick George Linde, B.S. ....	Auburn
1277 First av, San Francisco.	
Charles Pierre Louis Mathé .....	San Francisco
3367 Twenty-sixth st, San Francisco.	
Laird Monterey Morris .....	Berkeley
2229 Vine st, Berkeley.	
Myrl Morris, B.S. ....	Berkeley
2229 Vine st, Berkeley.	
Robert Reid Newell .....	Stockton
1457 Tenth av, San Francisco.	
Joseph Allen Owen, B.S. ....	Red Bluff
1420 Fifth av, San Francisco.	
Frank William Pinger .....	Berkeley
1251 Second av, San Francisco.	
Jacob Leroy Pritchard, M.S. ....	New Mexico
458 Frederick st, San Francisco.	
John Carroll Buddock, M.S. ....	Ukiah
1277 First av, San Francisco.	
Margaret Schulze, M.S. ....	Berkeley
1731 Carlton st, Berkeley.	
Henry Hunt Searls, B.S. ....	Nevada City
64 Sixth av, San Francisco.	
Julius Sherman .....	San Francisco
Mount Zion Hospital, San Francisco.	
Robert Stanton Sherman, M.S. ....	Newcastle
3367 Twenty-sixth st, San Francisco.	
William Ben Thompson, M.S. ....	South Pasadena
1251 Second av, San Francisco.	
Marshall Gould Williamson, B.S. ....	San Francisco
1631 Oak st, San Francisco.	

## THIRD YEAR

Frank Philip Brendel .....	Sacramento
1251 Second av, San Francisco.	
Leonard William Buck, M.S. ....	San Francisco
1431 Fifth av, San Francisco.	
Pini Joseph Calvi, B.S. ....	San Jose
1116 Clay st, San Francisco.	
Allan Largess Cohn, B.S. ....	San Francisco
2436 Clay st, San Francisco.	
Mendel Leopold Cohn, B.S. ....	Placerville
2630 Piedmont av, Berkeley.	

Orrin S. Cook, B.S. ....	Lodi
1420 Fifth av, San Francisco.	
Charles Alfred Craig .....	Lakeport
450 Irving st, San Francisco.	
Jewel Fay, B.L. ....	Berkeley
1381 Third av, San Francisco.	
Howard Webster Fleming, B.S. ....	San Jose
1251 Second av, San Francisco.	
William Christensen Frey .....	Modesto
1275 Third av, San Francisco.	
Eduardo Gonzalez, B.S. ....	Costa Rica
131 Hugo st, San Francisco.	
James Ernest Harvey .....	Los Angeles
1251 Second av, San Francisco.	
Robert Harold Heaney, A.B. ....	San Francisco
4287 Twenty-third st, San Francisco.	
Mervyn Heller Hirschfeld, B.S. ....	San Francisco
731 Duboce av, San Francisco.	
Merrill Windsor Hollingsworth, B.S. ....	Los Angeles
56 Delmar st, San Francisco.	
*Douglas Roy MacColl, B.S. ....	Berkeley
2608 Benvenue av, Berkeley.	
Harold Hoagland McCoy, B.S. ....	Beaumont
11 Woodland av, San Francisco.	
Emma Mehlmann, B.L. ....	San Luis Obispo
San Francisco Relief Home, San Francisco.	
Hiram Edgar Miller .....	Elk Grove
1420 Fifth av, San Francisco.	
Vinton Adolf Muller .....	Nevada City
1420 Fifth av, San Francisco.	
Hugh Elmer Penland, B.S. ....	Berkeley
2350 Woolsey st, Berkeley.	
Alma Stevens Pennington, B.S. ....	San Francisco
2828 Folsom st, San Francisco.	
Elizabeth Schulze, B.S. ....	Berkeley
1731 Carlton st, Berkeley.	
Lewis Seligman .....	Dinuba
1278 Fourth av, San Francisco.	
Alson Anderson Shufelt .....	Reno
2520 Twenty-fourth av, San Francisco.	
Daniel Warren Sooy .....	North San Juan
1251 Second av, San Francisco.	
William W. Washburn, B.S. ....	Putney, Vermont
1420 Fifth av, San Francisco.	

\* Absent on leave, 1915-16.

John Chilton Williams, B.S. ....	Fresno
131 Hugo st, San Francisco.	
Elmo Russell Zumwalt .....	Richmond
19 Woodland av, San Francisco.	

## SECOND YEAR

Mary Isabella Armstrong, A.B. ....	Piedmont
112 Bonita av, Piedmont.	
Thomas Floyd Bell, A.B. ....	Oakland
1379 Fifth av, San Francisco.	
Charles Barrows Bennett, M.A., Sc.M., Ph.D. ....	Berkeley
Physiology Building, University of California.	
Robert Wilson Binkley, A.B. ....	Santa Ana
1251 Second av, San Francisco.	
Florence Josephine Chubb, B.L. ....	Bakersfield
1200 First av, San Francisco.	
Earle J. Clark, B.S. ....	Seattle, Washington
1283 Second av, San Francisco.	
Frederick Carl Cordes, A.B. ....	Los Angeles
36 Broderick st, San Francisco.	
Henry Chipman Dodge, A.B. ....	Stockton
1251 Second av, San Francisco.	
Charles Louis Freytag, A.B. ....	San Rafael
1283 Second av, San Francisco.	
Walter Herbert Frolich, A.B. ....	San Francisco
330 Willard st, San Francisco.	
Cavins Deter Hart, A.B. ....	Colusa
131 Hugo st, San Francisco.	
Mary Ruth Hill, A.B. ....	Carson City, Nevada
131 Hugo st, San Francisco.	
Harold Homer Hitchcock, A.B. ....	Berkeley
130 Irving st, San Francisco.	
Fred Gooding Holmes, A.B. ....	Berkeley
131 Hugo st, San Francisco.	
William Patrick Joseph Lynch .....	Stockton
321 Parnassus av, San Francisco.	
John Gray McQuarrie .....	Beaver City, Utah
1551 Tenth av, San Francisco.	
Sidney Olsen, A.B. ....	Riverside
1420 Fifth av, San Francisco.	
Ralph Rabinowitz, A.B. ....	San Francisco
1714 Steiner st, San Francisco.	
*Alverda Elva Reische .....	Meridian
2420 College av, Berkeley.	

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\* Absent on leave, 1915-16.



Ethel Lucia Righetti, B.S. ....	San Francisco
305 Walnut st, San Francisco.	
Homer Righetti, A.B. ....	San Francisco
305 Walnut st, San Francisco.	
William Dan Sink, A.B. ....	Oakland
829 East Nineteenth st, Oakland.	
William Otto Solomon, A.B. ....	Eureka
131 Hugo st, San Francisco.	
Laurence Taussig, A.B. ....	San Francisco
2450 Fulton st, San Francisco.	
Fletcher Brandon Taylor, A.B. ....	Pasadena
1420 Fifth av, San Francisco.	
*Ruth Olive Winegarden ....	Pasadena
2118 Channing way, Berkeley.	
LeGrand Wooley, A.B. ....	Kanab, Utah
1551 Tenth av, San Francisco.	

## FIRST YEAR

Philip Howard Arnot, A.B. ....	Placerville
2646 Dwight way, Berkeley.	
Dorothy Wells Atkinson, A.B. ....	Tacoma, Washington
2627 Hearst av, Berkeley.	
Arthur Elmer Belt, A.B. ....	Huntington Park
2926 Fulton st, Berkeley.	
Alfred Poyncer Briggs, B.S. ....	Los Angeles
2521 Durant av, Berkeley.	
Wallace Rideout Briggs, A.B. ....	Sacramento
2421 Durant av, Berkeley.	
Edwin Louis Bruck, A.B. ....	St. Helena
2522 Ridge rd, Berkeley.	
*Zach Benjamin Coblentz ....	Santa Maria
2400 Durant av, Berkeley.	
Chester Arthur DeLancey ....	Oakland
625 Sycamore st, Oakland.	
Charles Beebe Fowler, A.B. ....	San Francisco
2522 Ridge rd, Berkeley.	
Mervyn Francis Frandy, A.B. ....	Nevada City
2315 Bowditch st, Berkeley.	
Cletus Henry Graves ....	Pennington
1811 Hearst av, Berkeley.	
Charles Clarke Hall, A.B. ....	Portland, Oregon
2228 Channing way, Berkeley.	
Lloyd Elliott Hardgrave ....	Taylorsville
1640 Euclid av, Berkeley.	

\* Absent on leave, 1915-16.

*Darrell B. Hawley .....	Annapolis
2034 Kittridge st, Berkeley.	
Lyman Dunlap Heacock .....	San Francisco
1420 Ninth av, San Francisco.	
William Latimer Holter, A.B. ....	Chino
1726 Euclid av, Berkeley.	
Heinz G. Hummel, A.B. ....	Bayreuth, Germany
2235 Durant av, Berkeley.	
Thomas Waterman Huntington, Jr. ....	San Francisco
2717 Hearst av, Berkeley.	
Albert Maurice Jacobs .....	Oakland
East Nineteenth st and Third av, Oakland.	
John Morris Keefe .....	San Francisco
72 Central av, San Francisco.	
Charles Edward Locke, Jr., A.B. ....	Los Angeles
2521 Durant av, Berkeley.	
Frederick George Maggs .....	San Francisco
125 Alpine ter, San Francisco.	
Robert Carson Martin, A.B. ....	Portland, Oregon
2646 Dwight way, Berkeley.	
Oscar Kempfer Mohs, A.B. ....	San Leandro
1640 Euclid av, Berkeley.	
Lois Pendleton, A.B. ....	Berkeley
2342 Eunice st, Berkeley.	
Delta Marie Ross, A.B. ....	San Bernardino
2550 Benvenue av, Berkeley.	
George Konhall Shew, A.B. ....	San Jose
2116 Channing way, Berkeley.	
Harry Pratt Smith .....	Oakland
St. George's court, Oakland.	
Susie Boyd Sulhoff .....	San Jose
2237 Piedmont av, Berkeley.	
James McGeough Sullivan, A.B. ....	San Francisco
759 Buena Vista av, San Francisco.	
Bert Stanford Thomas, A.B. ....	San Francisco
2528 Ridge rd, Berkeley.	
Harold Guyon Trimble .....	Oakland
386 Oakland av, Oakland.	
Hans von Geldern, A.B. ....	San Francisco
2501 Ridge rd, Berkeley.	

## SUMMARY

## Candidates for the Degree of Doctor of Medicine

Fourth Class .....	29
Third Class .....	29
Second Class .....	27
First Class .....	33
Total .....	118

\* Absent on leave, 1915-16.



## GRADUATES



GRADUATES

1864

D'Amour, Ferdinand  
Davie, Jr., J. C.  
\*DuBois, A. L.  
\*Handy, J. C.  
Pond, W. B.  
\*Stivers, C. A.  
\*Weeks, F. L.  
Welch, W. P.

1865

Drinkhouse, E. J.  
Fahn, C. M.  
Gros, Edward  
Taylor, Edward R.

1866

Barber, Edward T.  
\*Brierly, Conant B.  
Fine, Andrew  
Heavitt, Granville  
Lingo, Marin B.  
\*Plummer, Richard H.  
\*Prevost, J. Benny  
Richardson, J. A.  
\*Rupe, Samuel H.

1867

Cairns, John  
\*Hackett, John  
Hansen, Thomas C.  
\*O'Neill, A. A.  
\*Robinson, Luke  
Shelton, Thomas W.  
Steely, John  
\*Widney, J. P.

1868

Bates, Charles B.  
\*Cameron, James S.  
\*Corbett, S. J.  
\*McGuire, Lucius  
\*Newmark, Valentine  
Waltz, G.

1869

Caldwell, Robert  
\*Clark, J. J.

Cochran, W. A.  
Haile, C. S.  
\*Toland, Charles A.  
\*Tuttle, H. P.  
\*Turner, J. T.  
Webber, J. C.  
\*Younger, Alex. J.

1870

Briggs, M. W.  
Mackenzie, J. H.  
Rucker, H. N.  
Sage, C. T.  
Seawell, John L.

1871

Churchill, Leonard  
\*Hampton, James E.  
\*Kirkpatrick, C. A.

1872

Keane, George B.  
Kurtz, Joseph  
\*Lyford, L. Dexter

1873

\*Anderson, J. A.  
\*Cox, Thomas H.  
\*Martineaut, E. D.  
Mays, William H.  
\*O'Neill, J. C.  
\*Schnabel, Martin  
\*Whittell, A. P.

1874

Biggs, Frederick P.  
\*Blake, James W.  
\*Delmont, Francois  
\*Hicks, Young E.  
\*McDermott, William P.  
McLean, Robert A.  
Miller, Charles F.  
Nottage, George E.  
\*Waters, John W.

1875

Agnew, William P.  
Allen, Edward O.

\* Deceased.

\*Benedict, C. W.  
 Calbreath, John F.  
 Callaghan, D. T.  
 Davidson, Joseph R.  
 \*Dawson, Alson  
 Harris, Thomas W.  
 Kosbue, A. Emil  
 Mason, Benjamin F.  
 Miller, John A.  
 Scheelhaus, E. J.  
 \*Simon, Jules A.  
 Smith, William P.  
 Swann, Charles M.

1876

\*Blake, Charles M.  
 \*Braman, J. J.  
 Brown, George J.  
 \*Chaigneau, V. A.  
 \*Connolly, John J.  
 \*Hodgdon, W. H. A.  
 \*Hook, Walter E.  
 Kirkwood, J. W.  
 \*Lindenberger, W. H.  
 McCormack, H. F.  
 Minor, John F.  
 Pope, Horace E.  
 Powell, J. M.  
 \*Quinlin, Albert P.  
 Rorke, James  
 Seawell, Thomas W.  
 Sichel, Gust. W.  
 Smith, T. H.  
 \*Summers, G. M.  
 Wanzer, L. M. F.

1877

\*Duncan, S. C.  
 \*Frost, James  
 \*Heinimann, J. M.  
 Joshephi, Simon E.  
 McColl, G. F.  
 McDonald, J. J.  
 \*Pescia, Joseph  
 \*Reich, George A.  
 \*Reynolds, George E.  
 Stephenson, B. E.  
 Swisher, J. R.  
 Von Buelow, F.  
 Weiss, E. M.  
 Wheaton, S. P.  
 Williamson, W. T.

\* Deceased.

1878

Bradbury, George F.  
 Bruns, William C.  
 Curran, Mary K.  
 \*Guillemard, A. J.  
 \*Lewitt, Frank A.  
 \*McLaughlin, M. A.  
 Osler, Charles  
 \*Pruett, J. A.  
 Seavey, L. T.  
 Shuey, Sarah I.  
 Summers, John F.

1879

Addington, D. M.  
 \*Downs, George W.  
 \*Foote, Gilbert  
 \*Gale, Herbert A.  
 Harmon, Roberdeau  
 \*Howell, H. H.  
 \*Hughes, Lewis J.  
 Johnstone, Arthur.  
 Scott, Arthur W.  
 Smith, George S.  
 Sparks, Agnes  
 Voight, W. C.  
 Younger, Edward A.

1880

\*Bettelheim, A. F.  
 \*Caldwell, H. H.  
 \*Foulkes, J. F.  
 Hopkins, T. P.  
 Laidlaw, Horace  
 Lord, Franklin F.  
 \*Meyers, Robert C.  
 Mueller, H. E.  
 Pond, Henry M.  
 Robertson, John W.  
 Sobey, L. A.

1881

Bates, Walter E.  
 Beardsley, E. M.  
 Clinton, Charles A.  
 \*Dean, Andrew J.  
 DePuy, Anson A.  
 Evans, C. W.  
 \*LeFevre, J. P.  
 Gillham, G. W.  
 \*Grattan, E. L.  
 Merritt, Emma L. Sutro

Morgan, F. E.  
Olds, William H.  
Sawyer, H. C.  
\*Sellon, Anna F.  
Sheets, John H.  
Young, Junius D.

1882

Beaumeister, Benjamin H.  
Bromly, R. Innis  
\*Buchard, L. S.  
Matthewson, J. M.  
Merritt, George Washington  
\*Moody, Mary W. F.  
\*Muenter, Henry  
Patterson, T. J.  
Payne, Joseph Richey  
Pressley, John B.  
Reardon, Thomas B.  
\*Senter, E. S.  
\*Stanton, James  
\*Stewart, J. M.  
Tarter, Albert P.

1883

\*Bordé, Henry J.  
\*Hughes, Jerome A.  
Lonigo, Emile V.  
Lovett, William B.  
\*Lundborg, Gustaf W.  
Mervy, Emile C.  
Patton, Charles J.  
Reed, Clarence E.  
\*Riley, Jahial S.  
Urban, Kurt  
\*Wickman, William J.

1884

Anderson, Winslow  
\*Beede, William M. S.  
Buckley, Vincent P.  
Clark, William D.  
Connolly, Thomas E.  
D'Ancona, Arnold A.  
Day, John G.  
Dodge, Henry Washington  
\*Enright, Chas. M.  
Gates, Frank H.  
\*McCoy, Juan W.  
Nuttall, George H. F.  
Partsch, Herman  
Scholl, Albert L.  
\*Sherman, Elenora S.

\* Deceased.

1885

Armistead, Howell V.  
Baldwin, Robert O.  
\*Collins, Addison C.  
Gallwey, John  
Howard, Katherine I.  
Lustig, Daniel D.  
Nichols, Theodore A.  
\*Perrault, Edward L.  
\*Wilcox, Wilbur J.  
Williamson, John M.  
\*Winton, Henry M.  
Woods, W. E. Josephine  
\*Wooster, David

1886

Brown, Ernest L.  
\*Chalmers, William P.  
Conlan, William E.  
Kingsley, Thomas H.  
\*Plant, Benjamin A.  
Soboslay, Julius  
Wilson, Kemlo R. McD.

1887

Cluness, Wm. R., Jr.  
Cook, Frank S.  
Fottrell, Michael J.  
Glaze, George I.  
Howard, William B.  
Kirchhoffer, Frederick  
Koboyashi, Sankio  
Mays, Arthur H.  
\*McLean, John T.  
Morrill, Augustus L.  
\*Park, Theorilda C.  
\*Reardon, William E.  
Shannon, James  
Tevis, Henry L.  
Watanabe, Tey  
Williams, Robert B.

1888

Alexander, Monrove E.  
Barbat, John H.  
Cox, Rosamond L.  
\*Dennis, Nathan P.  
\*Dunn, James P. H.  
\*Estes, Melvin B.  
Frick, Euclid B.  
Happersberger, Albert K.  
Kelly, John L.  
Noble, John A.  
White, James T.



## 1889

- \*Bunker, Robert E.
- \*Foreman, Francesca I.
- Gleaves, Christopher C.
- Greene, Frances R. Marx
- Haskin, William H.
- Holmes, Edward R.
- Jones, Ottowell W.
- Kawakami, Nasayasu
- Mather, Squire R.
- Mayer, Oscar J.
- O'Brien, Aloysius P.
- Oliver, Joseph A.
- Tuggle, Samuel P.
- Wade, Mark S.
- \*Zeyn, Gustav C.

## 1890

- Bond, Frederick T.
- Felt, Rae
- Hawkins, William J.
- Hunkin, Samuel J.
- \*Kugeler, Henry B. A.
- Mann, Chas. S.
- \*Martinez, John M.
- Meyer, Albert G.
- Mohun, Charles C.
- Montgomery, Charlotte B. S.
- Scholl, Albert J.
- Surryhne, Benjamin F.
- Thrasher, Marion

## 1891

- Baker, Henry Anthony
- Blake, Charles Robert
- Burnham, Clark James
- Collischonn, Philip
- Driscoll, Edward Paul
- Dunbar, Arthur White
- Ford, Campbell
- \*Kirby, William Thomas
- Lagan, Edward
- Macdonald, John Munroe
- McMurdo, John R.
- Milton, Joseph Leo
- Molony, James John
- Morse, Fred Wellington
- Olsen, Marie Colditz
- \*Oviedo, Louis Perfecto
- Petrie, Frank Branson
- \*Sims, John Marion
- Smith, Weston Olin
- Warner, James Kyle
- Wayson, James Thomas

## 1892

- Caglieri, Guido E.
- Crook, Emma E.
- \*Fraser, S. J.
- Johnstone, Ernest Kinlock
- Lowe, Frederick William
- \*McCone, James F.
- Nelson, John A.
- Ogden, George W.
- Rathbone, William T.
- Sanborn, Franklin H.
- Schram, Lillie Bussenius
- Sutherland, Robert L.
- Terry, Wallace Irving
- Von Adelung, Edward, Jr.

## 1893

- Aird, John W.
- Berndt, Richard M. H.
- Cadwallader, Rawlins
- Conrad, David Andrew
- Cothran, Abraham L.
- Falck, Millicent E.
- Fleming, Bartholomew Francis
- Flesher, Frederick Charles G.
- Freeman, Ernest Maynard
- Gall, Alexander Marshall
- Glover, Cosmos Andrew
- Horton, Edward Shelton
- Hulse, Clarence H.
- \*Lagan, Hugh
- Maguire, Charles S.
- McCarthy, Charles D.
- Phelan, Henry duR.
- \*Pond, Gardner Perry
- Rantz, Stephen H.
- Sanborn, William K.
- Schrader, Sydney H.
- Simon, Grace

## 1894

- Booth, John R.
- Bunnell, Edwin
- Clark, George Waverly
- Cleary, Stephen
- Crees, Robert
- De Puy, Edward Spence
- Dickerson, Clarence Fitzhugh
- Fitzgibbon, Frank Timothy
- Freeman, Charles Henry
- Greth, August
- Hill, Edward John
- Holmes, Thomas Blakeman

\* Deceased.

Leland, Thomas B. W.  
 MacInnis, Martin B.  
 McCullough, Frank E.  
 McKnight, Helen M.  
 Morrissey, Joseph Grant  
 Morrison, Mary E.  
 Pawlicki, Casimir F.  
 \*Reith, Fenelon M.  
 Root, Corydon B.  
 Ryfkogel, Henry A. L.  
 Selling, Natalie  
 Sharp, James Graham  
 \*Sime, Neli A.  
 Smith, Harvey F.  
 Stirewalt, Henry W.  
 Thompson, James Goodwin  
 Tiffany, Edward V.  
 Wilkes, Farrington  
 Wright, Henry E.

1895

Bacigalupi, Louis D.  
 Badilla, Jose Crisanto  
 \*Barbat, William Benjamin Frank-  
 lin  
 Boyes, William J. R.  
 Browne, Augustus Frank  
 Dudley, Frank W.  
 Easton, Daniel E. F.  
 \*Emerson, Horatio B.  
 \*Flood, John J.  
 \*Gray, Robert F.  
 \*Hay, William G.  
 \*Heller, Clarence Louis  
 Helms, George L.  
 Hopkins, Edward Kimball  
 Hull, James P.  
 Hyde, George E.  
 Lartigau, August L. J.  
 \*Lutz, Frederick A.  
 MacCallum, Hammond J.  
 \*McCulloch, Thomas A.  
 Nast, John Ernest  
 Philips, Adelina M. Feder  
 Rinne, Frederick A.  
 Sankey, Mary J.  
 Schmeltz, Charles J.  
 Sharp, Rose Eppinger  
 Stone, Bertram  
 \*Trafton, William Augustus  
 Villain, Albert J.

1896

Allen, Clifford Emmet  
 Anderson, Helen O.  
 \*Armistead, Cecil M.  
 Bancroft, Eleanor May Stow  
 Beck, Henry Martin  
 Blum, Sanford  
 Botsford, Mary Elizabeth  
 Broughton, George Anthony  
 Burnham, William P.  
 Cameron, Howard McD.  
 Chace, William D'Arcy  
 \*Coe, Leonard Hayes  
 Cox, Thomas F.  
 Giannini, Attilio H.  
 Harrigan, Joseph T.  
 Katsuki, Ichitaro  
 Kellogg, Wilfred Harvey  
 \*Kearney, James Frederick  
 \*Lee, Arthur S.  
 Maloon, Clarence LaFayette  
 McGettigan, Charles D.  
 McLaughlin, Alfred  
 Maher, Thomas D.  
 Morgan, Charles L.  
 Morrow, Howard  
 Murphy, James Daniel  
 Muscot, Brayton  
 Newman, Alfred  
 Noble, Mary L.  
 O'Brien, John Henry  
 O'Brien, John Thomas  
 Oldenbourg, Louise Augusta  
 \*O'Malley, William Henry J.  
 Orr, Robert H.  
 Painter, George Louis  
 \*Parkman, Wallace Ernest  
 Putnam, Victor E.  
 \*Rochex, Joseph  
 Ryer, Marshall B.  
 Scott, Florence  
 \*Stafford, John T.  
 Stern, Arthur A.  
 Stewart, Mary J.  
 Stone, Mack V.  
 Stover, William M.  
 Thompson, Grace Feder  
 Thorpe, Lewis Sanborn  
 \*Trask, Henry Caustin  
 Trevino, Alberto  
 Waller, Newton B.

\* Deceased.

## 1897

Borchers, Bertha  
Curl, Holton C.  
Dunn, William Lawrence  
Hickey, Thomas A.  
\*Huntington, Samuel D.  
\*McMahon, Frank A.  
\*McLean, Murdoch

## 1898

Abraham, Henry  
Bartlett, Cosan Julian  
Bell, William Lisle  
Boalt, Grace S. Linforth  
Bruguiere, Pedar Sather  
Callaway, Edwin  
Crowley, Thomas J.  
Dufficy, George Woodward  
Fine, Henry M.  
Giroux, Edward David  
Hill, Howard Stephen  
Judell, Malvina I.  
Keenan, Alexander Stanislaus  
Lucchetti, Victor F.  
Menefee, Joseph S.  
Muller, Frederick C.  
Roche, Thomas B.  
Tillman, Frank J.  
Tobriner, Oscar D.  
Trew, Neil C.

## 1899

Arthur, Samuel Richard  
Ash, Rachel Leona  
Clark, Thomas James  
Colliver, John Adams  
Dinkelspiel, Edgar Meyer  
Ebright, George Elliot  
Emerson, Mark Lewis  
Franklin, Milton Washington  
Frick, Donald Jackson  
Gardner, Samuel James  
Gillihan, Allen Francis  
Graham, Harrington Bidwell  
Henesey, Walter Joseph  
Lanz, Paul Ruhnke  
Legge, Robert Thomas  
\*Millar, Charles Forester  
McElroy, Bernard Francis  
Onesti, Silvio Joseph  
Pope, Emma Wightman  
Pope, Saxton Temple

\* Deceased.

Rice, Edward James  
Stevens, William Emerson  
Stevenson, George Lawrence  
Taylor, James Edward  
\*Taylor, Oscar Nettleton  
Volkhardt, Vida Redington  
Weyer, Gustavus Adolphus  
Willard, William Patten

## 1900

Alderson, Harry Everett  
Bacigalupi, David Eugene  
Dorn, Dora Ida  
Doychert, Ernestine  
Farrow, Edgar James  
Fernandez, Manuel  
Fischer, Elizabeth F. J.  
Harvey, William P.  
Irones, Rutherford Buchard  
Klotz, Bernard John  
Langdon, Samuel Walter Ross  
Larson, Julia Paulina  
Laughlin, Clyde Briggs  
Maguire, Thomas Michael  
McChesney, George Jewett  
McIntosh, Arthur Merrill  
\*Miyabe, Tadataro  
Moore, William George  
Nolan, Mary Elizabeth  
Osprig, Peter  
Pratt, Matthew Dennis  
\*Reinhardt, George Frederick  
\*Russ, Raymond John  
Saph, Louis Victor  
Simpson, Frank William  
Sullivan, John Francis  
Sweeney, George Joseph  
\*Vassault, Theodora Elliott  
Watts, Herbert Charles  
Wemple, Emmet LeRoy, Jr.  
Wilder, Edwin Milton

## 1901

Arthur, Edgar Allen  
Beerman, Wilfred Fenton  
Dickie, Walter Murray  
Dresser, Ralph Orlando  
Force, John Nivison  
Hill, Florence McCoy  
Hill, Harold Phillips  
Hill, Reuben Chandler  
Kavanaugh, Mary Frances

Lennon, Milton Byrne  
 Leonard, John Vaughan  
 Lindsay, William Kinkade  
 Madsen, Rasmus Hansen  
 Lartigau, Kate Isabel Brady  
 Morong, Frederick Lincoln  
 \*Murphy, William James  
 Purlenky, George Philip  
 Sanborn, Fletcher Greene  
 Schmitt, Lionel Samuel  
 Seawell, James Walter  
 Simmons, Haydn Mozart  
 Smythe, Hudson  
 Sweetser, George William  
 Thomas, Benjamin  
 Toner, Joseph Michael  
 White, John Lysander  
 Woolsey, Chester Howard  
 Yanagisawa, Una Yone

1902

Bakewell, Benjamin  
 Baumgarten, William  
 Bill, Philip August  
 Buckley, Emma  
 Chilson, William Charles  
 Culver, Blanche C. Van Heusen  
 Deininger Marguerite  
 \*Fanning, Henry David  
 Foster, Ernest Charles  
 Gleason, Charles Raymond D.  
 Henderson, Frank Revere  
 Juilly, George Hippolyte  
 Kucich, Ostroilo Stanislaus  
 Lee, Adelbert Watts  
 Leimbach, John Herbert  
 Lendrum, Birney Alexander  
 Lensman, Arthur Pascal  
 Majors, Ergo Alexander  
 Mallery, John Harry  
 McGinty, Arthur Thomas  
 Meagher, Joseph Frederick  
 Merwin, Caroline Stow  
 Moulton, Dan Hazen  
 Newton, John Crockett  
 O'Donnell, Joseph Martin  
 Piper, Harry Elwin  
 Powers, George Herman  
 Pressley, James Fowler  
 Putnam, Frank L.  
 Quinn, Thomas D'Arcy McGee  
 Tebbe, Frederick Henry  
 Thompson, Lewis Lee

Topham, Edward  
 \*Walsh, William John  
 Williams, Walter Joseph M.  
 Zumwalt, Frederick H.

1903

Baer, Adolph  
 Biber, Paul Edward  
 Bine, René  
 Breitstein, Louis Isidor  
 Culver, George DeWitt  
 Duggan, Henrietta Hagan  
 Ellis, James Alexander  
 Girard, Frank Robert  
 Hamilton, James Kiah  
 Hill, Howard Gilman  
 Hurley, James Raymond  
 Johns, Madeline  
 Kavanagh, Joseph James  
 Lissner, Henry H.  
 Longabaugh, Rudolph Ignatius  
 McGuire, William Garrett  
 McKinnon, Aloysius John  
 McKown, Charles Lemon  
 McNab, Thomas Reid  
 Miner, Mark Leonard  
 Olcovich, Viola Ruth  
 Reynolds, Robert G.  
 Robarts, Harry Philip  
 Rosenberg, Caroline  
 Rutherford, Walter Scott  
 Stone, Earle Almerson  
 Stafford, David Emmet  
 West, Sydney Vattel  
 Wills, Clarence Alfred  
 Winslow, Josephine E. Barbat

1904

Baker, Morgan Dillon, Jr.  
 \*Baum, Maurice Lowell  
 Baumeister, Edward Emery  
 Brown, David William  
 Brownsill, Edith Sara  
 Castlehurn, Paul  
 Chain, John Nolan  
 Ewing, David Albert  
 Foshay, Arthur Wellesley  
 \*Harker, George Asa  
 Hart, Morton Edwin  
 Hector, Louise A. Linscott  
 Hector, Robert, Jr.  
 Hoag, Foster Melancton  
 Jacobs, Louis Clive  
 Kofoid, Henning

\* Deceased.

McClish, Clarke Loring  
 Mix, Pernier Albert  
 Nicholls, Robert Julian  
 Peoples, Stuart Zeno  
 Sandholdt, John Peter  
 Schwarz, Jacob  
 Slavich, John Francis  
 Smith, Eugene Kneeland  
 Van Tassell, Fred Hugh  
 Waldeyer, Wilhelm  
 Warren, Henry Claud  
 Webster, Hannah Ellen

## 1905

Albee, George Cummings  
 Alexander, Edgar William  
 Bigelow, Coniah Leigh  
 Blair, James Clark  
 Bricca, Constantine Raphael  
 Briggs, George Abiel  
 Cothran, William Franklin  
 Cowden, Ambrose Franklin  
 DeHaven, Mary Tom  
 Harker, Harriette Buttler  
 Hoffman, Herman Verplanck  
 Kenny, William  
 Peck, John William  
 Reeve, Oscar Charles  
 Ryan, Louis Xavier  
 Snyder, George Samuel  
 Turner, Eldridge Curts  
 Vickerson, John Irving

## 1906

\*Adler, Alexander  
 Brasier, Olive Violet  
 dal Piaz, Antonio Menotti  
 Dannenbaum, Sydney Roy  
 Doran, Alexander Vincent  
 Eidenmuller, William Cooper, Jr.  
 Franklin, John Henry  
 Hardy, Samuel Percy  
 Hays, Wilfred Bertram  
 Hunter, George Graham  
 Igo, Louise Mary  
 Jones, Charles Breckenfield  
 Kronenberg, Herman  
 Mahan, David Joseph  
 Ochsner, Richard Leon  
 Stone, Waid James  
 Temple, Jackson

Wrenn, Joseph Thomas  
 Zumwalt, Reuben Sylvester

## 1907

Alexander, Archie Addison  
 Allen, Frederick Madison  
 Bingaman, Elmer Wiley  
 Bixby, Wilfred Everett  
 Clark, John Aloysius  
 \*Craig, Lloyd Alexander  
 Dawson, William Calhoun  
 Devine, Cornelius Thomas  
 Dodds, Thomas Garfield  
 Gutzwiller, Anna Maria  
 Howell, Walter Orrin  
 Johnston, James Harvey  
 Ostrom, Earl Emmet  
 Paroni, Romilda  
 Panson, Charles Arthur  
 Peterson, Edward August  
 Proctor, Mehitabel Clara  
 Schulze, Otto Theodore  
 Sobey, Gifford Lyne  
 Stansbury, Middleton Pemberton  
 Stoddard, Thomas Albion  
 Sylvester, Florence Mabel  
 Telfer, Gavin James  
 Walcott, Allen Moore

## 1908

Beebe, Lela June  
 Briggs, LeRoy Hewitt  
 Bunnell, Alexander Sterling  
 Cartwright, Sanford Warren  
 Foster, Harry Emerson  
 Frates, Frank Edward  
 Howe, Louis Philippe  
 Jacobs, Samuel Nicholas  
 Jee, Shin Five Pond Moear  
 Johnson, Hans Coford  
 Lewitt, Frederick Clinton  
 Mansfield, Thomas Drummond  
 Meads, Albert Manson  
 Newman, Lester  
 Powell, Alvin  
 Sutherland, Robert Thomas

## 1909

Cohn, Herbert Jacob  
 McVey, Charles Leland  
 Meyers, Wallace Longfellow

\* Deceased.

Naffziger, Howard Christian  
White, Margaret

1910

Hooker, Marion Osgood  
Irwin, Wilbur Henry  
Long, Seely Frederick, Jr.  
Moore, Chester Biven

1911

Baldwin, Walter Isaac  
Best, Eldridge John  
Bryan, Lloyd  
Campbell, William Howard  
Gompertz, Kate Rawlinson  
Markel, Howard Hill

1912

Bailey, Samuel Ellsworth  
Bush, Henry Chesley  
Cleary, Ernest Winton  
Dozier, Linwood  
Hoag, Carl Leslie  
Kelly, Frank Lewis  
Long, Herbert Everett  
Powell, Dewey Robert  
Prince, Lionel David  
Stadtmuller, Ellen Smith  
Sweet, Clifford Daniel

1913

Allen, Warren Barrett  
Aller, Daniel Irwin  
Catton, Joseph Henry  
Cornell, Earl Hamilton  
Harvey, Richard Warren  
Marks, Selby Harold  
Risdon, Ruth Charlotte  
Tranter, Charles Lee

1914

Abbott, Roy Charles  
Barney, Edna Locke  
Baxter, Frank Stanley  
Berkley, Hugh Kling  
Bull, Edward Cline  
Cunningham, Ruby Lacy  
Ehlers, Henry  
Lewis, Elizabeth Grace

Pierce, George Warren  
Rowe, Albert Holmes  
Scatena, Fred Nicholas

1915

Betts, Irvin H.  
Clapp, Gordon Adams  
Epsteen, Abelson  
Friedman, Aaron  
Gelston, Clain Fanning  
Holzberg, Henry Leopold  
Kretsinger, George Arneke  
Kruise, Fred Herman  
Maxwell, Alice Freeland  
Rehffisch, John Morse  
Seaver, Homer Carlton  
Wells, Clarence Edgar  
Woolsey, John Homer

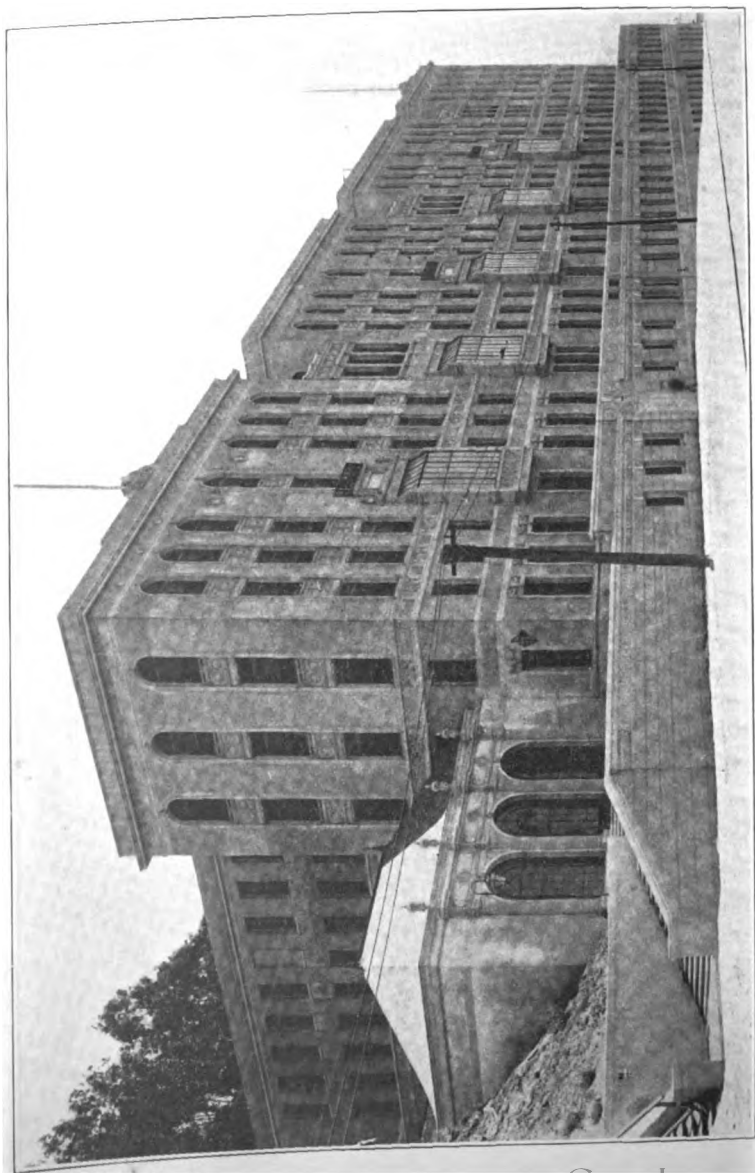
1916

Arrington, Mabel Florence  
Bailie, Elizabeth Worley  
Chamberlain, William Edward  
Charvoz, Elton Ralph  
Cook, Enos Paul  
Corey, Dunnleigh  
Craig, Mary  
Davis, Brython Parry  
Dunn, Thomas Balfour Mackie  
Goss, Orville Roscoe  
Hare, Herold Pittman  
Holliger, Charles Daniel  
Horner, Warren Douglas  
Jones, Maurice  
Linde, Frederick George  
Mathé, Charles Pierre Louis  
Morris, Laird Monterey  
Morris, Myrl  
Newell, Robert Reid  
Owen, Joseph Allen, Jr.  
Pinger, Frank William  
Pritchard, Jacob Leroy  
Ruddock, John Carroll  
Schulze, Margaret  
Searls, Henry Hunt  
Sherman, Julius  
Sherman, Robert Stanton  
Thompson, William Ben  
Williamson, Marshall Gould

**UNIVERSITY OF CALIFORNIA PRESS**  
**BERKELEY**  
**1916**







**UNIVERSITY OF CALIFORNIA**

**MEDICAL SCHOOL**

**ANNOUNCEMENT FOR 1917-18**

**UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL  
PARNASSUS AND SECOND AVENUES  
SAN FRANCISCO**



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## CALENDAR

1917

July 1—Undergraduate applications for admission to the Medical School, with credentials, should be filed at the Dean's office. This may be done by mail.

August 9 (Thursday)—14 (Tuesday)—Entrance examinations at Berkeley for freshman standing (pre-medical) in the College of Letters and Science. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before August 8 (Wednesday). But applications for permits to be sent by mail should be made as far in advance of August 8 (Wednesday) as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall, Berkeley.

August 13 (Monday)—Examinations begin for applicants for advanced standing and for students previously conditioned.

August 16 (Thursday), 17 (Friday), 18 (Saturday), 9 a.m.—12m.—Registration of students of all classes at Secretary's office in the main building of the Medical School in San Francisco.

August 20 (Monday)—Class work begins. *Payment of the first installment of the tuition fee is required on or before this date.*

November 29 (Thursday)—December 1 (Saturday)—Thanksgiving recess.

December 10 (Monday)—Examinations begin.

December 17 (Monday)—Christmas vacation begins.

1918

January 7 (Monday)—Second half-year; class work begins. *Payment of the second installment of the tuition fee is required on or before this date.*

March 23 (Saturday)—Charter Day: a holiday.

April 29 (Monday)—Examinations begin.

May 15 (Wednesday)—Commencement.

May 20 (Monday)—August 10 (Saturday)—Summer vacation.

August 12 (Monday)—Examinations begin for applicants for advanced standing and for students previously conditioned.

August 15 (Thursday), 16 (Friday), 17 (Saturday), 9 a.m.—12 m.—Registration of students of all classes at Secretary's office in main building of the Medical School in San Francisco.

August 19 (Monday)—Class work begins.

November 29 (Thursday)—November 30 (Saturday)—Thanksgiving recess.

December 9 (Monday)—examinations begin.

December 16 (Monday)—January 4 (Saturday)—Christmas vacation.

1919

January 6 (Monday)—Second half-year; class work begins.



## **ORGANIZATION AND HISTORY**





# REGENTS OF THE UNIVERSITY

NOTE.—The regular meetings of the Regents are held at 2 p.m. on the second Tuesday of each month, except July, and on the day before Commencement, at such places as may from time to time be determined, ordinarily at the California School of Fine Arts, California and Mason streets, San Francisco. The Los Angeles office of the Regents is in Room 417, Union League Building, Los Angeles.

## REGENTS EX OFFICIO

His Excellency WILLIAM DENNISON  
STEPHENS  
Governor of California and President of  
the Regents  
Sacramento

—, Lieutenant-Governor of Cali-  
fornia

CLEMENT CALHOUN YOUNG, B.L.  
Speaker of the Assembly  
Shattuck av and Addison st, Berkeley

EDWARD HYATT, B.S.  
State Superintendent of Public In-  
struction  
Sacramento

Hon. JOHN M. PERRY  
President of the State Agricultural  
Society  
10 W Weber av, Stockton

LIVINGSTON JENKS, A.B., LL.B.  
President of the Mechanics' Institute  
807 Mechanics Institute bldg, San  
Francisco

BENJ. IDE WHEELER, Ph.D., LL.D., Litt.D.  
President of the University  
217 California Hall, Berkeley

## APPOINTED REGENTS

The term of the appointed Regents is sixteen years, and terms expire March 1 of the year indicated in parentheses. The names are arranged in the order of original accession to the board.

ISAIAH WILLIAM HELLMAN, Esq. (1918)  
Wells Fargo-Nevada National Bank, San  
Francisco

Mrs. PHOEBE APPERSON HEARST (1930)  
Pleasanton  
Business address: 410 Hearst bldg, San  
Francisco

ARTHUR WILLIAM FOSTER, Esq. (1932)  
1210 James Flood bldg, San Francisco

GARRETT WILLIAM McENERNEY, Esq.  
(1920)  
2002 Hobart bldg, San Francisco

RUDOLPH JULIUS TAUSSIG, Esq. (1932)  
Main and Mission sts, San Francisco

GUY CHAFFIN EARL, A.B. (1918)  
14 Sansome st, San Francisco

JAMES WILFRED MCKINLEY, B.S. (1922)  
706 Security bldg, Los Angeles

JOHN ALEXANDER BRITTON, Esq. (1930)  
445 Sutter st, San Francisco

CHARLES STETSON WHEELER, B.L. (1928)  
Nevada Bank bldg, San Francisco

WILLIAM HENRY CROCKER, Ph.B. (1924)  
Crocker National Bank, San Francisco

PHILIP ERNEST BOWLES, Ph.B. (1922)  
American National Bank, San Francisco

JAMES KENNEDY MOFFITT, B.S. (1924)  
First National Bank, San Francisco

CHARLES ADOLPH RAMM, B.S., M.A., S.T.B.  
(1928)  
1100 Franklin st, San Francisco

EDWARD AUGUSTUS DICKSON, B.L. (1926)  
1631 Cimarron st, Los Angeles

JAMES MILLS, Esq. (1926)  
Hamilton City

CHESTER HARVEY ROWELL, Ph.B. (1920)  
Fresno

## OFFICERS OF THE REGENTS

His Excellency Wm. Dennison Stephens  
President  
Sacramento

Ralph Palmer Merritt, B.S.  
Comptroller

220 California Hall, Berkeley

Victor Hendricks Henderson, B.L.  
Secretary and Land Agent  
104 California Hall, Berkeley

Mortimer Fleishacker, Esq.

Treasurer  
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H. E. RUGGLES, M.D., Chief of Clinic.	L. BRYAN, M.D.
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## ORTHOPEDIC SURGERY

W. I. BALDWIN, M.D., Chief of Clinic.	A. L. FISHER, M.D.
H. H. MARKEL, M.D.	
MARGARET ANDREW, in charge of Medical Gymnastics.	
J. W. RHODES, Mechano-Therapist.	
F. E. BOERKE, Mechano-Therapist.	

## WOMAN'S CLINIC

J. C. NEEL, M.D., Chief of Clinic.	ALICE F. MAXWELL, M.D.
M. SCHULZE, M.D.	

## TUBERCULOSIS CLINIC

G. H. EVANS, M.D., Chief of Clinic.	L. S. MACE, M.D.
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## SEROLOGICAL LABORATORY

L. S. SCHMITT, M.D., Chief	MISS ELIZABETH HENZEL
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SOCIAL SERVICE DEPARTMENT

LOUISE MORROW, M.D., Director of Social Service.  
 ROSE STEINHART, Assistant Social Worker, in charge of Infants.  
 MAUDE E. MORRISON, R.N., Prenatal Nurse.  
 SUSAN M. BRIGGS, R.N., Prenatal Nurse.  
 KATE M. DAVIS, R.N., Infant Welfare Nurse.

SAN FRANCISCO HOSPITAL MEDICAL STAFF

G. E. EBRIGHT, M.D. ....	Physician-in-Chief
HAROLD BRUNN, M.D. ....	Surgeon-in-Chief
W. P. LUCAS, M.D. ....	Pediatrician-in-Chief
HOWARD MORROW, M.D. ....	Dermatologist
J. V. COOKE, M.D. ....	Pathologist
G. H. EVANS, M.D. ....	Visiting Physician
W. F. BLAKE, M.D. ....	Ophthalmologist
W. G. MOORE, M.D. ....	Gynecologist
M. B. LENNON, M.D. ....	Neurologist
L. S. SCHMITT, M.D. ....	Serologist
L. I. BREITSTEIN, M.D. ....	Obstetrician
W. P. WILLARD, M.D. ....	Urologist
F. C. LEWITT, M.D. ....	Laryngologist
L. S. MACE, M.D. ....	Assistant Visiting Physician
L. P. HOWE, M.D. ....	Assistant Visiting Surgeon
H. C. NAFFZIGER, M.D. ....	Assistant Visiting Surgeon
R. W. HARVEY, M.D. ....	Assistant Visiting Neurologist
B. STONE, M.D. ....	Assistant Dermatologist
H. W. WRIGHT, M.D. ....	Assistant Neurologist
H. H. MARKEL, M.D. ....	Assistant Visiting Surgeon
L. H. BRIGGS, M.D. ....	Assistant Visiting Physician
H. S. THOMPSON, M.D. ....	Assistant Visiting Surgeon
C. R. BRICCA, M.D. ....	Visiting Laryngologist
E. C. FLEISCHNER, M.D. ....	Assistant Pediatrician

RESIDENT HOUSE STAFF (SAN FRANCISCO HOSPITAL)

— — —, M.D., Resident Physician.  
 R. S. SHERMAN, M.D., Resident Surgeon.

INTERNS

P. J. CALVI, M.D.	E. MEHLMANN, M.D.
W. C. FREY, M.D.	D. W. SOOY, M.D.
LOUISE H. STEEL-BROOKE, M.D.	



## HISTORY AND DEVELOPMENT OF THE SCHOOL

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In 1862 Dr. H. H. Toland erected a building to serve as the nucleus of a medical school. This was subsequently known as Toland Hall, and in 1872 was formally transferred to the Regents of the University of California as a department of the University. For many years the affiliation was merely nominal and the medical faculty was in entire control of the policy of the school, the support of the institution being derived from fees of the students.

In 1895 the course of instruction was extended from three to four years. In 1898 the school was moved to its present location on Parnassus Heights, a tract of land of thirteen and one-half acres donated to the University by the late Adolph Sutro. Funds were provided by the Legislature to erect buildings for law, medicine, dentistry and pharmacy, and at a later date the law building was transferred by the Board of Regents to the Medical School.

In 1902 the Board of Regents adopted a resolution of vital importance to the Medical School. Instead of preserving the former loose affiliation it was determined to regard the medical department as an integral part of the University. The properties of the school were transferred to the University, the students' fees were turned into the general University fund and support of the school was assumed by the Regents. The first two years of medicine were at once put upon an academic basis and suitable laboratories equipped.

With the destruction of the Out-Patient Department by the earthquake and fire of 1906 it became necessary to transfer the work of the first two years to Berkeley and to transform the main building of the school into a hospital and out-patient clinic. In December, 1911, the Regents of the University announced their intention of bringing together the various departments of the school, of providing a proper modern teaching hospital and of placing the clinical years upon an academic basis. Therefore, on April 9, 1912, it was resolved to consolidate all departments of the school in San Francisco as soon as feasible. A recommendation of the President of the University was adopted which provided a plan of reorganization for the clinical years.

Clinical instruction is now divided into four main departments—Medicine, Surgery, Diseases of Women, and Pediatrics. The departments of Obstetrics and Gynecology and Pediatrics are in charge of full-time teachers, and as soon as possible the departments of Medicine and Surgery will be placed upon the same basis.

In 1914 a Department of Tuberculosis and a Department of Psychiatry were established and work in these departments included in the curriculum.

In 1915 arrangements were perfected by which an agreement with the Hospital for Children and Training School for Nurses was brought about and in the same year the Regents of the University agreed to take over the Hahnemann Medical College of the Pacific and to include electives in Homeopathy in the curriculum of the Medical School.

In 1916 Biochemistry was separated from Physiology and a department of Biochemistry and Pharmacology established. A department of Preventive Medicine and Hygiene has also been started.

During the same year the Regents adopted a plan for the future development of the school. This plan contemplates the building of a nurses' home in connection with the new University Hospital, new buildings to house the departments of Anatomy and Pathology, the erection of an out-patient building, the adaptation of existing buildings for purposes of administration, students' quarters, laboratories, library space, and to house the departments of Physiology and Biochemistry.

#### THE GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH

In memory of her husband, George Williams Hooper, a pioneer citizen of San Francisco, Mrs. Hooper, on Commencement Day, May 14, 1913, transferred to the Regents of the University certain valuable property to serve as a foundation for an institute of medical research. The income at present provided is \$50,000 a year, but \$100,000 per annum will be available in a few years.

The formal opening of the Foundation was celebrated on March 7, 1914. Addresses were delivered by Dr. Henry S. Pritchett, President of the Carnegie Foundation for the Advancement of Teaching; Dr. Richard M. Pearce, Professor of Research Medicine, University of Pennsylvania; and Hon. Curtis H. Lindley. The policy and work of the Foundation is determined by an advisory board of seven members conferring with the Regents of the University.

The building formerly occupied by the Veterinary School has been devoted by the Regents of the University to the work of the Foundation. Dr. George H. Whipple, formerly Associate Professor of Pathology in Johns Hopkins University, is Director, and is also Professor of Research Medicine in the Medical School. The work of the Hooper Foundation, therefore, is closely correlated with that of the Medical School. Men at work in the Research Laboratory have free access to the University Hospital wards and positions in the Hooper Foundation will be available for men in the Medical School who desire to enter a career in research medicine. The work of the Hooper Foundation in no way replaces any of the research in the various departments of the Medical School.



**REQUIREMENTS FOR ADMISSION  
AND GRADUATION**



## REQUIREMENTS FOR ADMISSION\*

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A preliminary collegiate preparation is required for the course in medicine, and men and women are admitted on the same terms. As candidates for the degree of Doctor of Medicine the school receives the following:

1. Graduates of approved colleges or scientific schools who present evidence of a satisfactory training in chemistry, physics and zoology and a reading knowledge of German or French. The courses in chemistry must include inorganic and organic chemistry.

2. Students in the College of Letters and Science of this University who have attained senior standing may, at the beginning of their fourth or senior year in the University, register as students in the Medical School, and upon completion of the first year in the Medical School may receive the bachelor's degree in the College of Letters and Science. Such students must also furnish evidence that they have had a satisfactory training in chemistry, physics, and zoology, and that they possess a reading knowledge of German or French.

3. Students who has satisfactorily completed at least two full years of collegiate work and who have received the junior certificate of this University, or its equivalent.

The studies pursued during the two years which lead to the junior certificate include English, American history and civics, mathematics, chemistry, biology (zoology), physics, and German or French.† Applicants for admission to the Medical School who have pursued their pre-medical studies in some other university must submit credentials from the institution in which they have studied. This statement should include the number of hours devoted to classroom and laboratory work and also the grade received in each subject. For the guidance of those who wish to arrange their preliminary training the following courses given in this University present the minimum of satisfactory preparation in the sciences named (numbers refer to the Announcement of Courses for 1917-18): Chemistry 1A-1B, 8A-8B, 9; Physics 2A-2B, and 3B; Zoology 1A, 1B, 108. These courses are described below.

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\* All inquiries should be addressed to the Dean of the University of California Medical School.

† Certain state boards of examination require all subjects to be completed before admission to medical study.

## CHEMISTRY

## 1A-1B. General Inorganic Chemistry and Qualitative Analysis.

3 hrs., lectures and quiz, and 4 hrs. laboratory work, throughout the year; 5 units each half-year.

Lectures and quiz.

Associate Professor HILDEBRAND; Associate Professor BRAY, Assistant Professor BOOTH, Drs. GIBSON, ARGO, BRANCH, EASTMAN, and RODEBUSH.

Two sections: M W F, 9; M W F, 10.

Laboratory.

Assistant Professor BOOTH; Associate Professors BRAY and HILDEBRAND, Drs. GIBSON, ARGO, BRANCH, EASTMAN, and RODEBUSH.

Four sections: I, M F, 1-3; II, Tu Th, 9-11; III, Tu Th, 1-3; IV, W, 1-3; S, 9-11. Prerequisite: matriculation chemistry, subject 12b. In special cases students who have credit for matriculation physics may be allowed to take this course without the chemistry prerequisite, but in no case without the written consent of the instructor.

## 8A-8B. Elements of Organic Chemistry.

Dr. PORTER.

An introductory study of the compounds of carbon. Recitations and lectures with experimental illustrations. Laboratory course 9 should, if possible, accompany this course.

2 hrs., throughout the year. Tu Th, 8. Fortnightly quiz, hour to be arranged, probably M or Tu, 4.

## 9. Elements of Organic Chemistry: Laboratory.

Dr. PORTER.

A comparative experimental study of the physical properties and chemical reactions of the more commonly occurring classes of organic substances. Supplementary to course 8A-8B and open to all students enrolled in that course.

6 hrs., either half-year; 2 units. M W or W F or M F, 1-4.

## PHYSICS

## 2A-2B. General Physics.

Professor LEWIS and Associate Professor MINOR.

Lectures with experimental illustration and problems. Properties of matter, mechanics, heat, sound, light, energy transformation, electricity, and magnetism.

3 hrs., throughout the year. Prerequisite: matriculation subject 11, which may be waived in cases of distinct merit. Some knowledge of plane trigonometry is desirable. Sec. I, elective in the College of Letters and Science, M W F, 3, Professor Lewis. Sec. II, primarily for pre-medical students, Tu Th S, 11, Associate Professor Minor.

## 3B. Physical Measurement.

Associate Professor MINOR.

Experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. Methods are selected so as to show instructive relations of physical principles and their adaptation to practical problems. Laboratory exercises twice a week. This course is usually taken in conjunction with 2A-2B.

6 hrs., second half-year; 2 units. Sec. I, M F, 1-4; II, Tu Th, 1-4; III, W, 1-4; S, 8-11. Prerequisite: matriculation subject 11.

## ZOOLOGY

## 1A. General Zoology.

Professors KOWD and HOLMES, Associate Professor DANIEL, Assistant Professors LONG, CORT, Dr. BARROWS, and Assistants.

An introduction to the facts and principles of animal biology, with special reference to the structure, functions, and evolution of animal life.

Lectures, 2 hrs., laboratory, 4 hrs., first half-year; 4 units. Lectures, Tu Th, 10; laboratory sections: I, M W, 8-10; II, M F, 2-4; III, Tu Th, 8-10; IV, Tu Th, 2-4; V, W, 2-4; S, 9-11 or 10-12.

The laboratory exercises are essentially illustrative of lectures and are based on the examination of living and prepared specimens, supplemented by models and charts. Professor Cort in charge.

## 1B. General Zoology. Associate Professor DANIEL and Assistants.

A continuation of course 1A. The behavior, structure, and development of animal types, with special reference to the lower vertebrates.

6 hrs., second half-year; 4 units. Lectures, Tu Th, 10; laboratory, three sections: I, Tu Th, 8-10; II, Tu Th, 2-4; III, W, 2-4; S, 9-11. Prerequisite: course 1A.

## 108. Embryology.

Assistant Professor LONG.

The phenomena of animal development, fundamental facts of reproduction, comparative embryology and organogeny of the higher vertebrates. Lectures, reading, and laboratory.

8 hrs., second half-year; 4 units. Lectures, Tu Th, 9. Laboratory, two sections: I, Tu Th, 8-9, 10-12; II, Tu Th, 1-4. Prerequisite: courses 1A and 1B.

The following courses offered in the Summer Session of 1917 may be substituted for those of the above designated by similar numbers.



**CHEMISTRY****S8A. Elements of Organic Chemistry.****Professor FRANKLIN.**

An introduction to the study of compounds of carbon. Recitations and lectures with experimental illustrations. 2 units.

M Tu W Th F, 11.

**PHYSICS****S3AB. Physical Measurement.****Dr. GARDNER.**

A laboratory course in general physics, offering opportunity for experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. The course, in detail, will be adapted to the needs of individual students and may cover any portion of the laboratory work of the regular session. Credit, not to exceed 4 units, may be given for the course.

M Tu W Th F, 9-12 and 1-4.

**ZOOLOGY****S108. Embryology.****Mr. TAYLOR.**

The fundamental facts of reproduction, the early stages of development of vertebrates, the formation of organs, and the foetal membranes of mammals, including man. Laboratory study of preparations of chick and pig embryos. Lectures, demonstrations. Laboratory fee \$5, of which \$3 will be retained and the balance, after deducting for breakage, refunded. 4 units.

M Tu W Th F, 8-12.

In preparation for these studies it may be mentioned that high school physics and chemistry are necessary in order to enroll in the beginning university courses in the same subjects. Whereas these requirements as specified will be accepted for admission in the medical school, it should be pointed out that it is highly desirable that the student should not content himself with the acquisition of a junior certificate, but should take at least three years of college work, if possible. By this means not only is more time offered for work in subjects of general culture outside the scientific requirements but by a combined eight-year course (three years as an undergraduate in the university and five years in the medical school) the two degrees of A.B. and M.D. may be obtained.

Students taking the combined course have the privilege of broad

election from the various departments of the University, and they are advised to make their selection from subjects not related to the specific requirements.

The faculty of the Medical School is authorized to refuse admission to students who have a low academic record.

#### ADMISSION TO ADVANCED STANDING

Applicants for admission to advanced standing may become candidates for the degree of M.D. under the following conditions: (1) They must furnish evidence that they were eligible for admission to the first year of this school. (2) They must show that courses equivalent in kind and amount to those given in this school in the year or years preceding that to which admission is desired have been satisfactorily completed in an acceptable medical school.\* Students taking work at a college with a lower classification will not be granted credit. (3) At the discretion of the Dean, they must be prepared to pass examinations in those subjects for which they ask credit.

#### INSTRUCTION FOR GRADUATES IN MEDICINE

Graduates in medicine may arrange with the heads of the different departments for special work. Graduate students may enter at any time during the year and must register at the Dean's office before beginning work.

Except under extraordinary circumstances and at the discretion of the Advisory Board of the Medical Faculty, persons who have already received the degree of Doctor of Medicine will not be admitted as candidates for that degree from this University.

#### CLASS STANDING AND EXAMINATION

The judgment of an instructor upon the work of a student may be determined by (a) personal contact and observation of routine work, (b) by oral, written or practical examination, (c) by a combination of these methods.

It is optional with each department whether students are examined at the end of each course or examined when the work of a department is completed.

For the determination of the students' right to advancement and graduation each department makes such rules as it deems necessary, and

\* By an acceptable medical school is meant one classified as "A" by the American Medical Association, and whose entrance requirements are equivalent to those of this School.

the result is indicated as "Passed with Honor," "Passed," or "Not Passed."

At the end of the third half-year and at the end of the period of required work the students' records are referred to the respective committees on instruction for review. Students who fail to pass in any two major subjects, in one major and three minor subjects, or in six minor subjects may be dropped from the Medical School. Students who fail to pass in a major subject or in three minor subjects will be placed on probation and must take a second examination before the following half-year. Students who fail in the second examination may be dropped from the Medical School.

Students who have an unabsolved failure in any one subject of the first three half-years will not be permitted to enter the third year except by recommendation of the Advisory Board of the Medical School.

Students who have an unabsolved failure at the end of the fourth year will not be recommended as entitled to the degree of Doctor of Medicine or permitted to enter their intern year until the failure is absolved in such manner as may be indicated by the Advisory Board of the Medical School.

The Faculty reserves the right to sever the connection of any student with the Medical School at any time for what it deems either mental, physical, or moral unfitness for a career in medicine.

#### LEAVES OF ABSENCE

Students who withdraw from the Medical School without notice or who fail to report after a leave of absence may have their connection with the Medical School terminated.

#### REQUIREMENTS FOR GRADUATION

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years and must be of good moral character. He must have studied medicine for four full years and must have attended four annual courses as a matriculated student (not including the fifth, or intern year), the last of which has been spent in this school. He must have completed the required work, have fulfilled satisfactorily all special requirements, and have received a satisfactory grade throughout the entire medical course. He must have discharged all indebtedness to the school.

#### FIFTH YEAR

Students are required to supplement the academic course in medicine with a year as intern in an approved hospital or laboratory, or as a

special worker in a department of the Medical School. Qualified students may take their year's laboratory work after the third semester.

During the period of the war the fifth year requirement may be suspended for those students desiring to enter the army or navy.

### CURRICULUM IN PUBLIC HEALTH

At the beginning of the second half of the fourth year in the Medical School students may elect to enter Public Health Curriculum C. This curriculum extends over a year and a half, and on its satisfactory completion the candidate is granted the degrees of Doctor of Medicine and Graduate in Public Health (Gr.P.H.).

The first year is devoted to courses offered by the various colleges of the University in Berkeley and the last half-year is devoted to work given in the Medical School.

### PUBLIC HEALTH CURRICULUM C

#### FOURTH YEAR IN MEDICINE

##### *Second Half-year (Berkeley)*

Subjects	Units
Civil Engineering 124 .....	3
Civil Engineering 128 .....	3
Economics 140 .....	3
Entomology 126 .....	3
Entomology 127 .....	2
Hygiene 104 .....	3
Hygiene 108b .....	3
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#### FIFTH YEAR IN MEDICINE

##### *First Half-year (Berkeley)*

Subjects	Units
Civil Engineering 125 .....	2
Hygiene 107 .....	3
Hygiene 108a .....	3
Political Science 115 .....	2
Veterinary Science 117 .....	3
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*Second Half-year (Medical School)*

Assignments	Units
San Francisco Health Department .....	4
Social Service Department .....	4
State Board of Health .....	4
Field Work in Epidemiology Research (with thesis) .....	4

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For students in public health and graduates in sanitary engineering provision is made in Public Health Curricula A and B, each leading to the degree of Graduate in Public Health. The instruction of the last year in each of these two curricula is given in the Medical School. Outlines of these curricula will be found in the *Announcement of the Graduate Division* and the *Circular of Information, Academic Departments*.

## **GENERAL INFORMATION**



## REGISTRATION

Applications for admission and for advanced standing must be addressed to the Dean of the Medical School, San Francisco. *They must be received at least one month prior to the beginning of the term, to allow time for investigation.*

Students will not be admitted to medical courses until they have registered at the office of the Secretary of the Medical School, Parnassus and Second avenues, San Francisco.

## FEES

The charge for tuition is one hundred and fifty dollars per annum, payable in two installments, August and January. Students will not be admitted to the courses until they have paid their fees for the ensuing half-year. A key and breakage deposit of \$25 in the first and second years and of \$10 in the third and fourth years is required for the use of lockers and to cover the cost of material used in laboratories and possible damage to college buildings and equipment.

In the first year there is an additional fee of \$15 for dissecting material, \$5 for each part.

During the first year and a half an Infirmary and Gymnasium fee of \$5 per half-year is required.

Students not registering on the dates announced will be charged \$2 additional.

Students not appearing for examinations on specified dates will be required to pay a fee of five dollars for a special examination.

Students registered in the Medical School and taking less than the required amount of work in any given half-year are required to pay a proportionate fee for tuition. Such students must first obtain the permission of the Medical Faculty.

## MICROSCOPES AND BLOOD-COUNTING APPARATUS

Students are advised to purchase their own microscopes, but those who do not care to do so may rent one from the school at a cost of five dollars per annum, with an additional charge of two dollars if an oil immersion lense is desired. Students using microscopes which belong to the school are liable for damage done the instruments while in their possession.

*The character of the practical work requires that each student own a blood-counting apparatus and ophthalmoscope. These should be purchased at the beginning of the second half of the second year.*

*Students are also required to supply themselves with the necessary slides and coverslips.*



### MEDICAL SUPERVISION OVER STUDENTS

Each year the faculty appoints a medical adviser to the students in the Medical School. This officer keeps a definite hour for consultation and when necessary visits students in their homes. Through him the services of specialists are secured when indicated.

Students of the first- and second-year classes are entitled to the advantages offered by the University of California Students' Infirmary in Berkeley. Students resident in Berkeley and requiring hospital care are provided for in the Infirmary, unless special nurses are necessary. Students of the third and fourth classes are similarly provided for in the University Hospital. A number of beds have been endowed for this purpose.

Medical students, as well as all other students, in the University of California are required to pass a physical examination by the Medical Examiner before entrance to the University.

### LIBRARIES

Instruction in the medical sciences and the various branches of clinical medicine is incomplete without constant reference to current and authoritative monographic and periodical literature. In research work the need of a complete reference library is obvious.

Each of the departments in Berkeley—Anatomy, Physiology, Biochemistry, Pathology and Bacteriology—contains a separate departmental library which, although a unit of the general University Library, is thus segregated as part of the working equipment of each department. Through the generosity of Mrs. Phoebe A. Hearst and Mrs. William H. Crocker, these departmental libraries are unusually complete; they also participate in the annual distribution of University Library funds.

The library at the Medical School in San Francisco contains a good collection of textbooks and monographs, which is increased each year through a special annual appropriation. The best current journals in French, German, and English are on file. A trained librarian is in charge of this library.

### LABORATORIES AND CLINICAL OPPORTUNITIES

Medical instruction of the first year and a half is carried on in the separate departmental buildings of Anatomy, Physiology, Biochemistry, and Pathology and Bacteriology situated on the University Campus in Berkeley. The present laboratory buildings are regarded as temporary, but are spacious and easily increased in size to meet growing demands; they are fully equipped not only for teaching but for research.

A new students' laboratory has been equipped in one of the existing buildings in San Francisco. This is used for instruction in clinical pathology, taught in the second half of the second year and also used by the students of the third and fourth years, to perform their necessary individual laboratory work. The various clinical departments have laboratories situated in the buildings in San Francisco.

#### THE UNIVERSITY HOSPITAL

The University Hospital is essentially a teaching hospital under the control of the Board of Regents of the University of California. The medical affairs of the hospital are so managed as to secure the most thorough utilization of the patients for the purpose of instruction and research.

Several endowment funds and the support of the University make free beds available for the study of interesting and unusual cases. The Associated Charities of San Francisco send to the hospital a number of deserving patients. Clinical material also is drawn from distant points. It is aimed to make this hospital a consulting place, to a great extent, for physicians of the State, a place where patients unable to pay for costly examinations or expert opinion may be sent for further investigation, returning to their own physicians with a report of the findings.

The new hospital building was erected and equipped by friends of the University at a cost of about \$750,000. It is located on Parnassus avenue, between Third and Fourth avenues, directly adjoining the Medical School. The site overlooks Golden Gate Park, the Presidio of San Francisco, San Francisco Bay, and the Pacific Ocean.

The hospital has a capacity of 220 beds, of which 50 are assigned to each of the following services, viz.: medicine, surgery, women's, and pediatrics. These different divisions are separated into distinct units, each pavilion extending back from the upper two floors of the main hospital building.

The main building is seven stories in height and extends along the entire Parnassus avenue frontage.

The floors are devoted respectively (1) to engine room, power plant, laundry and storage accommodations; (2) to kitchens, dining-rooms, laundry and receiving department for ambulance patients; (3) the main or administrative floor, to students' lobby, and students' recreation room. At the extreme western end of this floor are quarters for the house staff; on this floor also are the offices of the department chiefs; (4) operating rooms and laboratories; (5) actinography, photography, drug department, and isolation department; (6 and 7) ward floors—these are divided into separate units from east to west: (a) medicine, (b) surgery, (c) women's,

(d) children's. Each ward unit is provided with its own teaching-room and laboratory.

As the investigation of obscure diseases and the instruction of medical students and post-graduates are two of the chief aims of the hospital, facilities for these purposes have been carefully provided.

There are four main operating rooms and two smaller operating rooms for use of the specialists. A separate entrance and lobby is provided for students. By this arrangement greater privacy is obtained for patients. This arrangement also possesses great advantages for the students as well as the staff.

Similarly throughout the hospital its efficiency as a teaching institution has been kept paramount. The construction is such that the capacity of the hospital may be doubled at comparatively small expense.

#### THE SAN FRANCISCO HOSPITAL

The San Francisco Hospital has occupied its new buildings since July 1, 1915.

The present group consists of an executive building and sixteen large wards, with well arranged service rooms and clinical laboratories adjacent.

One wing contains the surgical unit, with six large operating rooms and the amphitheater, a well equipped Roentgen-ray department, and an emergency hospital. This latter will, during the coming year, serve as the main operative department for the city's Emergency Service, and will give unexcelled advantages to the interns and students in emergency surgical work.

The pathological building is now nearing completion. On the first floor there is a morgue room, with twenty-four De Camio mortuary slabs, so that bodies may be kept in refrigeration. Adjoining this is a large pavilion and amphitheater for post-mortem work and a series of rooms, kennels for research work, preparation rooms, etc. The second floor, when completed, will be used as the main chemical and biological laboratories of the Department of Public Health. Opportunity will be furnished here for interns to receive instruction in laboratory work, including the examination of milk, water, blood, toxicological specimens and preparation of vaccines.

The post-mortem material in the hospital is invaluable.

The new tuberculosis wards to accommodate 250 beds and the isolation wing of 110 beds for infectious diseases are now in the course of construction.

The Medical School controls approximately 100 beds (exclusive of the tuberculosis wards). These are equally divided for instruction in clinical medicine, clinical surgery, and the specialties. Additional wards are used

for the teaching of gynecology and obstetrics and pediatrics. The laboratories adjacent to the wards are fully equipped for the use of interns and students and the new laboratory building will give opportunity for special research.

#### OUT-PATIENT DEPARTMENT

The Out-Patient Department of the University Hospital provides facilities for instruction in all branches of clinical medicine and surgery. Diseases of every type are treated in the various clinics, each of which is under the supervision of a chief who is responsible for the instruction of the students.

During the third year and the first half of the fourth year groups of students are assigned to the clinics in medicine, surgery, woman's, pediatrics, dermatology, urology, ophthalmology, laryngology, orthopedic surgery, etc. In the last half of the fourth year students may elect to act as clinical clerks in some of the departments mentioned.

A large and varied clinical material is available and each year the growth of this department has been manifested by a continuous increase in the number of patients treated during the year. At present the daily average number of visits to the clinics is over 240. On account of this increase, clinics are being started in the afternoons to take care of the overflow. At these afternoon clinics in pediatrics fourth year students are assigned for definite clinical work. With this exception, all clinics are held simultaneously in the morning, so that patients may be referred from one clinic to another with great facility.

#### SOCIAL SERVICE DEPARTMENT

The Social Service Department has been thoroughly organized for the past two years. During 1916-17 there have been workers in the medical, woman's and children's clinics, and in addition voluntary assistance by students of the University has aided materially in carrying on the work of this department. The Social Service Department is in touch with all the various sources for medical care throughout the city, which very greatly facilitates the referring of cases to and from institutions and associations. A course for social service workers is being offered by the department in conjunction with the Department of Social Economics of the University. This work is under the direction of Dr. Louise Morrow, who is connected with the latter department as a lecturer and with the Medical School as assistant in pediatrics. An opportunity to study medical social service is offered to students working in the Out-Patient Department.

## TUBERCULOSIS CLINICS

The Department of Tuberculosis is under the charge of Dr. George H. Evans and is now maintained in conjunction with the San Francisco Society for the Study and Prevention of Tuberculosis. Upon the construction of an out-patient building this clinic will be established in conjunction with the Out-Patient Department of the University Hospital. Dr. Evans is also in charge of the University of California Medical School's service at the tuberculosis wards of the San Francisco Hospital. By this arrangement tuberculous patients of all types are available for investigation and teaching purposes.

## THE CANCER WARD

Through the generosity of a friend of the Medical School a ward in the hospital is reserved for the treatment of patients suffering from malignant diseases. Advanced and inoperable cases are received, as well as those not too far advanced to be benefited by surgical or other treatment. Thus the variety of cases and the long residence of certain of them afford an unusual opportunity to observe all phases of malignant diseases.

## THE HOOVER FOUNDATION FOR MEDICAL RESEARCH

The institution is located in a building adjacent to the hospital and its Director is also Professor of Research Medicine in the Medical School. A number of beds in the hospital are at the disposal of the Foundation and are occupied by patients suffering from diseases which at the moment are the subject of study and investigation by members of the Research Laboratory staff.

Professor Whipple and his associates offer elective courses to the medical students and a limited number of students may undertake research problems. The selection of such students will depend upon their fitness for this work. Opportunities also will be afforded graduates in medicine who wish to enter upon a career of research.

## TEACHING FACILITIES AT THE CHILDREN'S HOSPITAL

An agreement with the Hospital for Children and Training School for Nurses adds a large amount of available teaching material. The children's medical, surgical, and orthopedic services have about seventy beds available for teaching purposes, and with the contagious pavilion the opportunities for instruction are very good. Opportunities for small sections to elect work in the Children's Hospital is possible.

**COURSES IN HOMEOPATHY**

The Regents of the University have accepted the proposal of the Hahnemann Medical College of the Pacific and now offer elective courses in homeopathy in the University of California Medical School upon the following basis:

1. Beginning in August, 1915, all students matriculating in medicine must fulfill the requirements demanded by the University of California Medical School.

2. Instruction in Homeopathy is in charge of two professors, a Professor of Homeopathic Materia Medica and a Professor of Applied Homeopathic Therapeutics.

3. All students in the first two years take all work in common except in Materia Medica. In this subject 32 hours of so-called "Regular" Materia Medica and 32 hours of Homeopathic Materia Medica is given in the second half of the second year. Students may elect either one of these courses and hours of instruction are so arranged as to permit of election of both courses by all students who may so desire.

4. In the third and fourth years all students take the same courses except in Materia Medica and Therapeutics and Clinical Medicine. Elective courses in these subjects is offered so that students may choose whether they take work under instructors of the so-called "Regular" or of the "Homeopathic" school.

**SCHOLARSHIPS**

Through the generosity of Mrs. Frances B. Sanborn, one of the three scholarships known as the Sheffield Sanborn Scholarships has been assigned to the Medical School. This scholarship yields \$250 per annum at present and is open only to students who have not yet received the degree in medicine and who otherwise would not have the opportunity to acquire a university training.

The Willard Thompson Scholarship is open to students of the Medical School who are residents of Utah. This scholarship yields \$600 per annum.

Recently the alumni of the Medical School have established a scholarship known as the "William Watt Kerr Scholarship in Medicine." It yields \$400 per annum and is awarded to a worthy student of the Medical School.

Applications for these scholarships should be filed with the Recorder of the Faculties by March 1 of each year. A blank form of application may be obtained from the Recorder of the Faculties at Berkeley.

**FELLOWSHIPS**

Two fellowships are offered by the George Williams Hooper Foundation for the year 1917-18. Each student fellow receives a grant of \$600 and is charged no medical school nor laboratory fees. Applicants must have had at least one and one-half years of medical school training in the University of California Medical School or its equivalent. A year is devoted to this work, and consists mainly of research in experimental medicine. This work will be in part independent but in part coöperative research with other members of the laboratory staff. The fellow is expected to do some advanced work in gross pathology, and get a broad training in pathological anatomy. The work of this fellowship should give the research fellow exceptional training in the fundamental medical sciences and a broader outlook in general medicine. The value of this fundamental training to the medical student can not be overestimated, and a true understanding of research medicine can be obtained in no other way.

The work done under this fellowship, if satisfactory, may count as the fifth year in medicine. If the necessary preliminary requirements have been fulfilled, it may also count toward the attainment of a higher degree (Master's Degree or Doctor of Philosophy).

**HOSPITAL APPOINTMENTS**

Internships in the University Hospital are open to eleven graduates of the University of California Medical School or of some other approved medical school. Ten interns are assigned to the various clinical departments and one as pathological intern. Interns serve for one year, without salary. The appointments are made upon the recommendation of the Advisory Board of the Medical School, which takes into account both the character of the work of the candidate throughout his entire career in the Medical School and also his general fitness.

Internships in the San Francisco Hospital also are awarded to six members of the graduating class. Positions in some of the private hospitals in San Francisco are filled annually either upon recommendation of the Medical Faculty or by competitive examination.

The Regents of the University have provided positions for residents in medicine, surgery, obstetrics and gynecology, and pediatrics, and assistant residents in surgery, gynecology and obstetrics and pediatrics at the University Hospital. These appointments, not necessarily limited to one year, are open to graduates in medicine who have had previous hospital experience and possess suitable qualifications for the work. The

residents receive \$600 and the assistant residents \$300 a year and accommodations in the hospital.

The positions of House Physician and House Surgeon on the University of California Medical School service at the San Francisco Hospital have been established.

**LOAN FUND**

Through the generosity of an alumnus of the Medical School a small sum of money has been set aside to be loaned to needy students of the upper classes. Applications for loans should be addressed to the Secretary of the Medical School.





**PLAN OF INSTRUCTION AND  
ANNOUNCEMENT OF COURSES**



## PLAN OF INSTRUCTION

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### GENERAL STATEMENT

As in other departments of the University, instruction in the Medical School extends from the middle of August to the middle of May. The academic year is divided into half-years of sixteen weeks duration. The first half-year extends from August to the Christmas recess; the second from January to the close of the academic year.

The chief aim of the school is to develop medical practitioners and to offer facilities which will enable qualified students to prepare themselves for special medical work. The faculty is in sympathy with the principle which allows the student great freedom in choosing the direction his studies shall take. A system of instruction has been inaugurated which will permit wide choice in selecting the work of the last half of the fourth year.

The course of instruction is in harmony with the principles adopted by the Association of American Medical Colleges. Following the terminology employed by that association, the amount of work required in various subjects is indicated by the number of hours devoted to them. But in the case of the fundamental sciences—*anatomy, physiology, biological chemistry, pharmacology, pathology, and bacteriology*—the courses are also assigned a "unit" value such as other departments of this University employ. This expression is used since, under certain conditions, the subjects mentioned may be elected by non-medical students to fulfill the requirements for degrees other than the medical. In so far as the courses required for medical students are concerned, these units have no particular significance. The elective courses in these departments, however, may be taken by medical students in fulfilling requirements for a Master's degree, and the required courses may be counted in the combined course as fulfilling units for the A.B. degree, as well as part of the work for the M.D. degree.

In general, the University has adopted, as a standard, a unit of sixteen hours of didactic teaching, or forty-eight hours of laboratory work. The unit of demonstrative or clinical teaching occupies a middle ground of thirty-two hours. Thirty-two units represent the work of the average year. Exceptional students can carry two to four units more.

In general, the five years curriculum leading to the degree of Doctor of Medicine falls into four periods: first, that devoted to the fundamental medical sciences; second, that occupied by clinical instruction; third, the elective period; and fourth, the intern or laboratory year.

As the requirements for admission are such that the student enters after he has received training in physics, inorganic and organic chemistry, and biology, these subjects are not taught in the medical school. The first period of instruction covers three half-years and is devoted to anatomy, histology, physiology, biological chemistry, bacteriology, and pathology. Nearly all the work in these subjects is obligatory. They provide the basis for the study of clinical medicine; and the laboratory instruction which occupies the major portion of the student's time during this period is planned to develop powers of accurate observation.

Clinical instruction begins with the second half of the second year. The initial courses in medicine and surgery deal chiefly with the problems of diagnosis. They aim to train further the faculty of critical observation and to instill into the student good habits in taking case-histories and in carrying out systematically the examination of patients. In this half-year also materia medica, pharmacology, preventive medicine and hygiene, clinical pathology, ophthalmoscopy and elementary neurology, dermatology and obstetrics are taught.

Obligatory clinical instruction continues through the third year, and is given in the classroom, the clinical laboratory, the dispensary, and at the bedside. In the Out-Patient Department students take the histories of patients and make the necessary examinations under the direction of the attending staff. In the wards of the University Hospital and the San Francisco Hospital they are assigned cases for thorough study and have every opportunity to become familiar with therapeutic methods. In this year some of the major subjects are completed. During the first half of the fourth year the required work in medicine, surgery, gynecology, pediatrics and the various specialties are completed.

The elective period consists of the second half of the fourth year. All departments of the school offer optional work, and in general three possibilities are open to the student: (a) he may elect a number of short courses with a view to becoming a general practitioner; (b) he may select a few long courses looking toward a career in some special field of practice; (c) he may devote his time to the laboratories of the fundamental sciences for the purpose of training as a teacher and investigator.

**ARRANGEMENT OF STUDIES, 1917-18**

**FIRST YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
Histology .....	192
Anatomy .....	496
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	688
<b>Second half-year:</b>	
Neurology .....	80
Physiology .....	336
Biochemistry .....	272
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	688

**SECOND YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
Topographical Anatomy .....	64
Morbid Anatomy and Histopathology .....	240
Bacteriology and Protozoology .....	170
Immunology .....	118
	<hr/>
	592

<i>Subject</i>	<i>Total hours required</i>
<b>Second half-year:</b>	
Preventive Medicine and Hygiene .....	16
Pharmacology .....	96
Materia Medica, etc. ....	32
General Medicine and Clinical Pathology .....	256
Neurology .....	16
Dermatology .....	16
General Surgery .....	128
Obstetrics .....	32
	<hr/>
	592
<b>Homeopathic Materia Medica (elective) .....</b>	<b>32</b>

**THIRD YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
Preventive Medicine and Hygiene .....	16
Materia Medica, etc. ....	16
Therapeutics .....	48
General Medicine .....	128
Pediatrics .....	64
Neurology and Psychiatry .....	32
Legal Medicine .....	16
Dermatology .....	16
General Surgery .....	80
Ophthalmology .....	48
Obstetrics .....	80
Pathological Demonstrations .....	32
	<hr/>
	576

<i>Subject</i>	<i>Total hours required</i>
<b>Second half-year:</b>	
Therapeutics .....	16
General Medicine .....	128
Pediatrics .....	32
Neurology and Psychiatry .....	64
Legal Medicine .....	16
Dermatology and Syphilis .....	32
General Surgery .....	128
Ophthalmology .....	16
Laryngology, etc. ....	32
Urology .....	16
Obstetrics .....	48
Gynecology .....	80
Pathological Demonstrations .....	32
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	640

**FOURTH YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
General Medicine .....	128
Pediatrics .....	54
General Surgery .....	176
Orthopedic Surgery .....	48
Urology .....	32
Laryngology, etc. ....	32
Gynecology .....	32
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	502
<b>Second half-year:</b>	
Electives .....	560



## DEPARTMENTS OF INSTRUCTION

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### ANATOMY

HERBERT MCLEAN EVANS, B.S., M.D., Professor of Anatomy.

ROBERT ORTON MOODY, B.S., M.D., Associate Professor of Anatomy.

GEORGE W. CORNER, A.B., M.D., Assistant Professor of Anatomy.

PHILIP E. SMITH, M.S., Ph.D., Instructor in Anatomy.

KATHERINE J. SCOTT, A.B., M.D., Instructor in Anatomy.

\*BENJAMIN H. PRATT, M.A., Assistant in Anatomy.

†ALFRED V. WEPFER, B.S., Assistant in Anatomy.

The courses of instruction in anatomy are given in Berkeley. The classes in gross anatomy are divided into small groups in order to avoid the inevitable noise and disturbance which result from a large group of students working together. Material for dissection is prepared in the embalming room, which is equipped with the necessary hydraulic apparatus to inject both the embalming fluids and the color masses for the arteries and veins in any desired pressure. After this process is completed the bodies are preserved in a carbolic solution.

The teaching museum consists of specially prepared corrosions, injections, dissections, and models.

The laboratory for microscopic anatomy is outfitted with microtomes and is supplied with all the stains and reagents necessary for the ordinary and finer methods of microscopic preparation.

The routine work of the department falls into the natural divisions of gross and microscopic anatomy, and some effort is made to have the transition between the two as gradual as possible. Inasmuch as the process of formal education must end sooner or later, the department endeavors as far as possible to make the students entirely independent. This is further encouraged in the elective system, by which a certain amount of selection is allowed in the regular work of the department.

### MICROSCOPIC ANATOMY

The various tissues and organs of the body are studied from the developmental point of view so that their gradual differentiation from the embryonic to the adult form is taken up. Since function and structure cannot be separated in the consideration of the microscopic appearance of tissues and organs, their chief physiological aspects are briefly considered. The study of each group consists of three main steps: (1) for the

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\* In residence, first half-year.

† In residence, second half-year.

purpose of orientation, the consideration of their macroscopic appearances, relations, and physiology; (2) the transition from the macroscopic to the microscopic conditions is made with a dissecting microscope and teasing methods, free-hand or frozen sections; (3) the more detailed study is made from specimens prepared by methods designed to emphasize their principal microscopic features. In this course the value of comparing the organs of a series of animals is recognized and the student is given numerous comparative specimens.

**101. Histology and Microscopic Organology.**

Professor EVANS, Dr. SCOTT, and Mr. PRATT.

The course is given from the viewpoint of the activities of the living cell, the relation between structure and function being held uppermost. At the same time opportunity is afforded for a comprehensive review of human and comparative histology. Individual loan collections supplement the laboratory work.

First year, first half; 3 laboratory and 3 lecture periods a week. M W, 8-12; F, 8-11; S, 11-12.  
*192 hours—6 units.*

**102. General Human Anatomy.**

Associate Professor MOODY.

A study of the human body. Demonstrations and laboratory study of prepared human dissections, models and microscopic slides. For students of the Public Health and Physical Education departments. Other non-medical students may be admitted by arrangement with instructor if size of class permit. Prerequisite: Zoology 1a or Physiology 1.

Second half-year. Demonstrations Tu Th, 9; laboratory W, 1-4.

**103. Organs of Special Sense and Neurology.**

Dr. SMITH, Dr. SCOTT, and Mr. WEPFER.

In this course special attention is paid to the macroscopic and microscopic architecture of the central nervous system and the organs of special sense. The neuron studied in course 101 is used as the unit in the construction of the nervous system with a view of tracing origin, development, and final arrangement of the different pathways for nerve impulses. Considerable attention is given to a consideration of the growth and development of the nervous system.

First year, second half; 2 lectures and 1 laboratory period a week. F, 8-9 and 1-5.  
*80 hours—3 units.*

**105. Systematic Human Anatomy.**

Associate Professor MOODY, Assistant Professor CORNER, Dr. SMITH, and Mr. PRATT.

The systematic dissection of the human body. For convenience the work is divided into thirds or "parts," to-wit: Head and Neck,

Arm and Thorax, Leg and Abdomen. To better facilitate instruction, students in the Medical School are required to finish each part in accordance with a prescribed time schedule.

First year, first half; Tu Th, 8-12; S, 8-11; M Tu W Th F, 1-5.

496 hours—10 units.

#### 108. Regional and Topographical Anatomy.

Associate Professor MOODY and Assistant Professor CORNER.

Living models, special dissections and sections of the body are used in this course to enable the student to become more familiar with structural relations and to assemble information obtained in preceding dissections. Students who are accepted for course 211 may substitute that course for this course.

Second year, first half. Section I, Tu, 8-9, F, 8-11; Section II, Tu, 9-10, W, 1-4.

64 hours—3 units.

#### 109. Anatomy for Physicians and Advanced Students.

Professor EVANS, Associate Professor MOODY, and Assistant Professor CORNER.

*Hours to be arranged to suit applicants.*

#### ELECTIVES

#### 209. Human Embryology.

Professor EVANS.

Opportunity is offered for the study of specific problems in human embryology. The collections of both human and comparative embryological material are constantly being augmented. The elective is offered only to students familiar with vertebrate embryology.

*Hours to be arranged.*

#### \*210. History of Anatomy.

Assistant Professor CORNER.

Informal conferences upon the history and literature of anatomy and its relation to the progress of general medical knowledge, illustrated by old books and figures. Limited to six students, one hour weekly.

First year, first half.

*Hours to be arranged.*

#### 211. Physiological Anatomy of Reproduction.

Assistant Professor CORNER.

Informal conferences and demonstrations. The oestrous cycle, implantation, comparative placentation, etc. Outside reading required.

1 hr. weekly.

*Hours to be arranged.*

#### 212. Experimental Embryology.

Dr. SMITH.

Conferences and original work by the experimental method chiefly with amphibian material on problems of developmental mechanics. Second half-year.

*Hours to be arranged.*

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\* Not to be given, 1917-18. This course will be given alternately with course 211.

**213. Original Investigation.**

Professor EVANS and other members of the staff.

Students and others who are prepared to undertake research in any of the anatomical sciences will be given facilities and encouragement by members of the staff. Time devoted by the majority of the second-year class to course 108 can be applied here by those specially qualified.

*Hours optional.*

**214. Seminar.**

Topics will be discussed by the staff and those electing the course.

For the year 1917-18 topics will be chosen from the field of human and comparative embryology.

*Hours to be arranged.*

**PHYSIOLOGY**

SAMUEL S. MAXWELL, Ph.D., Associate Professor of Physiology.

THEODORE C. BURNETT, M.D., Assistant Professor of Physiology.

ROSALIND WULZEN, Ph.D., Instructor in Physiology.

LILLIAN M. MOORE, M.S., Instructor in Physiology.

GEORGE H. MARTIN, A.B., Assistant in Physiology.

JOHN A. LARSON, A.B., Assistant in Physiology.

Physiology 104M is required. The remaining courses are open to those students who have the time and the preparation necessary to pursue them with profit.

The equipment in the Rudolph Spreckels Physiological Laboratory comprises, in addition to the apparatus and conveniences for the customary lines of work in mammalian physiology, facilities for research in general physiology and experimental biology. The department library contains complete sets of all the important physiological journals and the more important monographs on physiological and related subjects.

**104M. Physiology.**

Associate Professor MAXWELL and Assistant Professor BURNETT.

The physiology of nerve, muscle, central nervous system, sensation, circulation, respiration, and secretion. The lectures cover in a systematic way the general subject matter of the topics stated above. Laboratory experiments are so arranged that the most important

fundamental observations are repeated. Attention is given to technique as well as to results. Continual use of the reference library is insisted upon. In addition to the routine work required alike of all students, each member of the class is required to demonstrate some special piece of experimental work; the demonstration is accompanied by a paper by another student on the subject which the demonstration illustrates, and each of the two hands in a carefully prepared bibliography. Thus each student is responsible for one demonstration, one paper, and two bibliographies. First year, second half. Lectures and recitations, M Tu W Th S, 11-12, F, 10-11; laboratory, M Tu W Th S, 8-11.

*336 hours—10 units.*

#### ELECTIVES

##### 110. Experimental Biology.

Dr. WULZEN.

Special problems in cell physiology and the tropisms. Designed to give introductory training in methods of research. Open to properly qualified students.

*Hours and credits by arrangement.*

##### 111. Advanced Physiology.

THE STAFF.

Some simple piece of research is repeated and extended in connection with a study of the original literature on the subject. Open to a few suitably prepared students.

*Hours and credits to be arranged in advance.*

##### 212. Research in Physiology.

Associate Professor MAXWELL and Assistant Professor BURNETT.

*Hours and credits to be arranged.*

##### 214. Journal Club.

The Department Staff.

Discussion of important advances in physiology, reports of research in the department, and abstracts of current papers. Open only to advanced students who have a reading knowledge of French and German. Application for membership should be made to Professor Maxwell.

Second year, first half. Tu, 5.

*1 unit.*

#### BIOCHEMISTRY AND PHARMACOLOGY

T. BRAILSFORD ROBERTSON, Ph.D., Sc.D., Professor of Biochemistry.

HARDOLPH WASTENEYS, Ph.D., Associate Professor of Pharmacology.

\*CHARLES B. BENNETT, Ph.D., Instructor in Biochemistry.

EDWARD SIGFRID SUNDSTROEM, M.D., Instructor in Biochemistry.

JOHN A. MARSHALL, M.S., Ph.D., D.D.S., Assistant in Pharmacology.

\* Absent on leave, first half-year, 1917-18.

The required courses are 101 and 102. The remaining courses are open to those students who have the time and the preparation necessary to pursue them with profit.

The equipment of the department affords ample opportunities for research. The types of investigation to which special attention has been given in recent years have been the following:

A. The physical chemistry of the proteins; particularly the physico-chemical behavior of protein solutions.

B. The analysis of blood-sera under varying physiological and pathological conditions; particularly the quantitative determination of the various protein fractions under conditions likely to be met with in clinical investigations or practice.

C. The kinetics of growth, particular attention having been paid to the study of the various substances which act as catalysors of the growth-process, and to the time relations of the growth of children and their relationship to environmental conditions.

In so far as the equipment and resources of the department admit, however, facilities are offered to any properly qualified person who desires to undertake a well-planned investigation in any field of biochemistry. Especial endeavor is made to provide every necessary facility for the carrying out of investigations having a bearing upon practical problems of medicine.

The joint library of the departments of Biochemistry and Physiology contains complete sets of all the important biochemical, pharmacological and physiological journals and the more important monographs on biochemical and related subjects.

#### **101M. Biochemistry.**

Professor ROBERTSON, Drs. BENNETT and SUNDSTROM.

In this course the foodstuffs are followed up from the moment that they are ingested to the moment when, after having circulated through the tissues and shared in their life, their final products are excreted from the body. The course may be considered as consisting of six parts, corresponding with various phases of the cycle of changes which the foodstuffs undergo. These divisions of the course are the following:

- (1) The foods; their properties, assimilation, and conversion into living matter or into reserve materials. The consideration of this phase of the subject takes the student to the point at which the foods have really become living matter or reserve materials. This leads naturally to the second part of the subject, namely:

- (2) The manner in which the physical and chemical properties of the foods determine the properties of living protoplasm.
- (3) The correlation of the different activities of the tissues in so far as this is brought about by chemical agents which are distributed through the agency of the circulation.
- (4) The chemical phenomena which accompany or underlie the performance of function by living tissues.
- (5) The waste products, their chemical nature, their derivation, and, to some extent, the method of excretion.
- (6) Regarding the entire body as a chemical machine, the efficiency of this machine is discussed and the relationship between the work it can perform and the nature of the fuel with which it is supplied.

First year, second half. Lectures, M Tu W Th, 1-2, F, 10-11; laboratory, M Tu W Th, 2-5. *272 hours—9 units.*

#### 102M. Pharmacology.

Associate Professor WASTENEYS and Dr. MARSHALL.

The physiological action of drugs, with illustrations derived from their therapeutic application; experiments and demonstrations.

Second year, second half. M W, 3-4, F, 1-5. *96 hours—3 units.*

#### ELECTIVES

#### 110. Advanced Chemical Biology.

Professor ROBERTSON.

Special topics may be selected by the student in conference with Professor Robertson.

*Credit not to exceed 4 units.*

#### 111. Problems in Metabolism.

Dr. SUNDSTROM.

First half-year. Lectures, M W, 1-2; laboratory, M W, 2-5.

*4 units.*

#### 210. Research in Biochemistry.

Professor ROBERTSON.

Open to qualified students who have the necessary time at their disposal. The subject and the time to be devoted to it to be arranged in conference with Professor Robertson.

#### 211. Research in Pharmacology.

Associate Professor WASTENEYS.

Open to qualified students who have the necessary time at their disposal. The subject and the time to be devoted to it to be arranged in conference with Professor Wasteneys.

**PATHOLOGY AND BACTERIOLOGY**

**FREDERICK P. GAY, A.B., M.D.**, Professor of Pathology.

**GLANVILLE Y. RUSK, A.B., M.D.**, Associate Professor of Pathology.

**JEAN V. COOKE, A.B., M.D.**, Assistant Professor of Pathology.

**IVAN C. HALL, M.S.**, Assistant Professor of Bacteriology.

**WILLIAM H. BARNES, A.B.**, Instructor in Bacteriology.

**DOLORES E. BRADLEY, M.A.**, Assistant in Bacteriology.

— — —, Assistant in Pathology.

**RUTH L. STONE, M.S.**, Edith Claypole Research Assistant in Pathology.

**CARL L. A. SCHMIDT, Ph.D.**, Research Assistant in Pathology.

Instruction in pathology and bacteriology is given in the Hearst Laboratory of Pathology and Bacteriology, in Berkeley during the second year and at the University Hospital and the San Francisco Hospital during the third and fourth years.

The course in pathology aims to outline the natural history of disease.

The instruction is for convenience divided into four correlated courses dealing with causation, progress, and effect.

**SECOND YEAR**

**101. Medical Bacteriology and Protozoology.**

Assistant Professor **HALL**, Mr. **BARNES**, and Miss **BRADLEY**.

History of bacteriology; morphology, classification, ecology and metabolism of micro-organisms; sterilization; preparation of culture media; microscopic examination, cultivation, and identification of bacteria; systematic study of pathogenic micro-organisms.

First half-year. M Tu Th F, lecture, 1-2; laboratory, 2-5.

*170 hours—4 units.*

**102. Infection and Immunity: Lectures.**

Professor **GAY**.

Accessible aspects of functional pathology; evolution of infectious diseases of the body and the mechanism of animal defense; principles of immunology and their applicability in prophylaxis, diagnosis and specific therapy.

First half-year. M W, 11-12.

*32 hours—2 units.*

**103. Infection and Immunity: Laboratory.**

Professor **GAY** and Mr. **BARNES**.

Experimental methods: demonstrations.

First half-year. M Tu Th F, 4-5.

*86 hours—1 unit.*



**104. Morbid Anatomy and Histopathology.**

Associate Professor RUSK and — —.

Changes in organs and tissues in disease in the animal and human body; macroscopic lesions illustrated by fresh material from autopsies and museum specimens. Lectures, conferences, and practice.

First half-year; M W Th S, 8-11.

*240 hours—6 units.***THIRD YEAR****105. Autopsy Course.**

Assistant Professor COOKE.

Post-mortem examinations at the University of California Hospital and the San Francisco Hospital.

First and second half-years.

*64 hours.***ELECTIVES****201. Research: Problems of Infection and Immunity.** Professor GAY.*Hours and units to be arranged.***202. Research: Neuropathology.**

Associate Professor RUSK.

*Hours and units to be arranged.***203. Research: Bacteriology and Protozoology.**

Assistant Professor HALL.

The investigation of concrete problems suggested by the work in medical bacteriology.

*Hours and units to be arranged.***204. Advanced Morbid Anatomy and Histopathology.**

Assistant Professor COOKE.

Autopsy technic and the working up of tissues and cultures resulting from post-mortem examination. Elective for fourth-year and for graduate students in medicine.

University Hospital.

*Hours and units to be arranged.***205. Experimental Pathology.**

Associate Professor RUSK and Dr. — —.

Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alterations; results demonstrated in course 104; special problems; open to qualified students and graduates by special arrangement.

**206. Immunochemistry. Seminar.**

**Dr. SCHMIDT.**

Consideration and discussion of the physical-chemical aspects of the subject of immunity. Informal discussion and presentation of current problems. 1 unit.

First half-year.

*Time to be arranged.*

**PREVENTIVE MEDICINE AND HYGIENE**

**WILBUR A. SAWYER, A.B., M.D.,** Clinical Professor of Preventive Medicine and Hygiene.

— — —, Assistant Clinical Professor of Preventive Medicine and Hygiene.

**JOHN N. FORCE, Gr.P.H., M.S., M.D.,** Lecturer in Preventive Medicine and Hygiene.

**WILLIAM C. HASSLER, Ph.G., M.D.,** Lecturer in Preventive Medicine and Hygiene.

**CHESTER G. GILLESPIE, C.E.,** Lecturer in Preventive Medicine and Hygiene.

Lectures on the epidemiology and control of communicable diseases, the sanitation of water, milk and food supplies, sewage disposal, vital statistics, occupational diseases, public and personal hygiene, and public health administration.

**SECOND YEAR**

**101A. Lectures.**

Professor SAWYER, Assistant Professor — —, Drs. FORCE, HASSLER, and Mr. GILLESPIE.

Second half-year, once a week.

*16 hours.*

**THIRD YEAR**

**101B. Lectures.**

A continuation of 101A.

First half-year, once a week.

*16 hours.*

For electives in this department see page 85.

**MATERIA MEDICA AND THERAPEUTICS**

**EUGENE S. KILGORE, B.S., M.D.,** Assistant Clinical Professor of Medicine.

**ALBERT SCHNEIDER, Ph.D., M.D.,** Instructor in Materia Medica.

**RENE BINE, M.D.,** Assistant in Medicine.

The work of this department is preceded by the courses in pharmacology and in infection and immunity, both of which furnish the student with fundamental ideas relating to preventive and curative medicine.

*Second Year.*—In the second half the course in materia medica consists of lectures, demonstrations and recitations on the sources, methods of preparation, and uses of drugs and biologic products, prescription writing, government control of drugs, etc.

*Third Year.*—In the first half the course in materia medica is completed and the course in therapeutics begun. The latter consists of lectures, recitations, demonstrations, and practical exercises. By the use of material in the wards and of case-histories stress is laid upon the application of therapeutic principles. Students are required to write specific directions for patients and for nurses and to execute many of the orders themselves. Comparatively few drugs are used. These occupy an important but by no means exclusive place in the teaching; and the primary emphasis is placed rather upon the other essentials of good treatment, such as regulation of diet, nursing, living conditions, and the securing of favorable mental attitude on the part of patients. Attention is given to biologic methods, to hydrotherapy, massage and other physical measures. Each student reports upon some therapeutic topic, either from a review of current literature or from personal observations in the wards; and one of the important objects of these reports is to reveal the conflicting state of therapeutic opinion and to impress upon students the necessity for conservatism in judging therapeutic claims.

## SECOND YEAR

- 101A. Lectures and Demonstrations in Materia Medica. Dr. SCHNEIDER.  
Second half-year, twice a week. 32 hours.

## THIRD YEAR

- 101B. Lectures and Demonstrations in Materia Medica. Dr. SCHNEIDER.  
A continuation of course 101.  
First half-year, once a week. 16 hours.

- 102A-102B. Lectures and Recitations in Therapeutics.  
Assistant Professor KILGORE and Dr. BINE.  
First half-year, three times a week; second half-year, once a week.  
64 hours.

MEDICINE\*

HERBERT C. MOFFITT, B.S., M.D., Professor of Medicine.

WILLIAM BOERICKE, M.D., Clinical Professor of Homeopathic Materia Medica.

SUMNER A. HILL, M.D., Clinical Professor of Applied Homeopathic Therapeutics.

GEORGE H. EVANS, M.D., Assistant Clinical Professor of Medicine.

HERBERT W. ALLEN, B.S., M.D., Assistant Clinical Professor of Medicine.

GEORGE E. EBBRIGHT, M.D., Assistant Clinical Professor of Medicine.

EUGENE S. KILGORE, B.S., M.D., Assistant Clinical Professor of Medicine.

JAMES L. WHITNEY, A.B., M.D., Assistant Clinical Professor of Medicine.

LEWIS S. MACE, A.B., M.D., Instructor in Medicine.

LEROY H. BRIGGS, M.D., Instructor in Medicine.

JULE B. FRANKENHEIMER, B.S., M.D., Instructor in Medicine.

SAMUEL H. HURWITZ, A.M., M.D., Instructor in Medicine.

ELDRIDGE J. BEST, B.S., M.D., Instructor in Medicine.

HANS LISSER, A.B., M.D., Instructor in Medicine.

ERNEST H. FALCONER, C.M., M.D., Instructor in Medicine.

LOVELL LANGSTROTH, A.B., M.D., Instructor in Medicine.

RENE BINE, M.D., Assistant in Medicine.

ESTHER ROSENCRANTZ, A.B., M.D., Assistant in Medicine.

JOHN M. BEHFISCH, A.M., M.D., Assistant in Medicine.

ROBERT R. NEWELL, M.D., Assistant in Medicine.

— — —, Assistant in Medicine.

Instruction is given both at the University Hospital and at the San Francisco Hospital.

*Second Year.*—Students begin their work in this department at the University Hospital during the second half of the second year. Two general introductory courses bridge the gap between the fundamental sciences and clinical medicine. Stress is laid upon instruction in history taking and physical diagnosis, and an endeavor is made to drill the student thoroughly at the very beginning in what may be termed a standard medical technic. This uniform technic in history taking, in recording physical and laboratory examinations, will be applied in all the student's later dispensary and ward exercises and will be carried even further into his work as clinical clerk and intern.

Laboratory work is given in the laboratory belonging to the department at the Medical School. Students are taught to make chemical and microscopical examinations of blood, urine, sputum, stomach contents, feces, and of ascitic, pleural, and cerebrospinal fluids. Great stress will

\* The Department of Medicine includes Neurology and Dermatology.

be laid upon the efficient performance of the various examinations by the individual student.

The elective course in Homeopathy covers by lectures, recitations and demonstrations the essential characteristics of drugs; their sources; preparations; and range of physiologic and therapeutic action according to the Law of Similars.

*Third Year.*—Throughout the year clinical lectures and demonstrations will be given the entire class twice a week. During the first half-year clinical exercises in small sections will be given at the University Hospital and during the second half-year at the San Francisco Hospital.

Throughout the year clinical lectures and demonstrations in Applied Homeopathy and its scientific treatment of disease will be given twice a week. Clinical exercises in Applied Homeopathic Therapeutics and repertory methods will be given at the San Francisco Hospital.

*Fourth Year.*—During the first half-year clinical ward work is continued at the San Francisco Hospital and clinical work in the tuberculosis wards is begun. Ward work is given to small sections at the University Hospital. In the second half of the fourth year elective work is offered both at the University and San Francisco hospitals.

A duplication of the above in the Homeopathic course is also offered.

## SECOND YEAR

### 101. Propedeutics of Medicine.

Professor MOFFITT and Assistant Professor ALLEN.

Second half-year, once a week.

16 hours.

### 102. Physical Diagnosis and History Taking.

Assistant Professor KILGORE and THE STAFF.

Second half-year.

*Each student, 128 hours.*

### 103. Clinical Physiology.

Assistant Professor KILGORE.

Second half-year, once a week.

16 hours.

### 104. Clinical Pathology.

Dr. HURWITZ.

Second half-year, twice a week.

96 hours.

### A. Homeopathic Materia Medica. Professor BOERICKE and Dr. BROOKS.

Second half-year, twice a week.

*Electives.*

**THIRD YEAR**

- 105A-105B. **Clinical Medicine.** Professor MOFFITT.  
First and second half-years, twice a week. 64 hours.
106. **Section Work at University Hospital.**  
Assistant Professor KILGORE and STAFF.  
First half-year. Each student, 96 hours.
107. **Section Work at San Francisco Hospital.**  
Assistant Professor EBRIGHT and Dr. BRIGGS.  
Second half-year. Each student, 96 hours.
- B. **Applied Homeopathy.** Professor HILL.  
First and second half-year, twice a week. Elective.
- C. **Section Work (S. F. H.).** Professor HILL and — — —.  
Applied Homeopathy.  
First and second half-year. Elective.

**FOURTH YEAR**

108. **Clinical Lectures and Demonstrations.**  
Assistant Professor EBRIGHT.  
First half-year (S. F. H.), twice a week. 32 hours.
109. **Section Work at San Francisco Hospital.**  
Assistant Professors EVANS and EBRIGHT, Drs. BRIGGS and MACE.  
First half-year. Each student, 48 hours.
110. **Ward Work at University Hospital.** Dr. WHITNEY.  
First half-year. Each student, 48 hours.
- D. **Section Work (S. F. H.).** Professor HILL and — — —.  
Applied Homeopathy.  
First half-year. Elective.
- For electives in this department see pages 85-87.

**RESEARCH MEDICINE**

**THE GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH**

GEORGE H. WHIPPLE, A.B., M.D., Professor of Research Medicine.  
ERNEST L. WALKER, B.A.S., D.S., Associate Professor of Tropical Medicine.  
KARL F. MEYER, A.B., D.V.M., Associate Professor of Tropical Medicine.  
CHARLES W. HOOPER, A.B., M.D., Assistant Professor in Research Medicine.  
ALICE RODEH, B.S., M.D., Assistant Professor in Research Medicine.  
WALTER C. ALVAREZ, M.D., Instructor in Research Medicine.

WILLIAM J. KERR, B.S., M.D., Fellow in Research Medicine.  
MARJORIE G. FOSTER, M.A., Fellow in Research Medicine.  
JOSEPH WEBB, A.B., M.D., Fellow in Research Medicine.  
MARGARET BEATTIE, M. A., Fellow in Research Medicine.  
FRIEDA S. ROBSCHT, Fellow in Research Medicine.  
ARTHUR E. BELT, A.B., Student Fellow in Research Medicine.  
CHARLES C. HALL, A.B., Student Fellow in Research Medicine.  
HARRY P. SMITH, A.B., Student Fellow in Research Medicine.

Facilities for work in Research Medicine are available during the entire year for those who have had the necessary training. The experimental work is open to students of the second, third, and fourth years of the Medical School, as well as graduates in medicine and advanced students who have had proper training.

The fundamental value of such work for the student lies in the training in the *method of research*. In this manner the student is given an opportunity to help in working out some small research problem and an insight into medical research can be gained in no other way.

Candidates for elective work in the Research Laboratory are expected to devote at least the time equivalent to a double course in this subject.

#### 201. Experimental Medicine.

Professor WHIPPLE and Assistant Professor HOOPER.

Students who have had sufficient training will be given opportunity to work on some problem related to the research work of the laboratory staff. This work will be carried on under the personal supervision of the members of the laboratory staff and the student in reality will be treated as a voluntary assistant in Research Medicine.

*Hours to be arranged.*

#### 202. Research in Tropical Medicine.

Associate Professors WALKER and MEYER.

Problems in protozoology, bacteriology, zoology, and immunity.

*Hours to be arranged.*

#### 203. Research on Applied Clinical Bacteriology and Immunology.

Associate Professor MEYER.

This course is open to students or graduates who have taken Pathology 101 and 102 or equivalent.

*Hours to be arranged.*

**204. Clinical Chemical Methods.**

Assistant Professor RHODE.

Laboratory training is offered in some of the more important quantitative methods available for clinical and experimental studies in metabolism.

*Hours to be arranged.*

**205. Research in Biological Chemistry.**

Assistant Professor RHODE.

Experiments may be conducted on animals to study biochemical relations and functional significance of various solid and gaseous constituents of blood under normal and pathological conditions.

*Hours to be arranged.*

**CLINICAL NEUROLOGY AND PSYCHIATRY**

MILTON B. LENNON, A.B., M.D., Assistant Clinical Professor of Neurology.

ROBERT L. RICHARDS, A.B., M.D., Lecturer in Psychiatry.

V. H. PODSTAT, M.D., Lecturer in Psychiatry.

RICHARD W. HARVEY, M.S., M.D., Instructor in Neurology.

EVA C. REID, M.D., Assistant in Psychiatry.

CHARLES L. TRANTER, B.S., M.D., Assistant in Neurology.

HAROLD W. WRIGHT, M.D., Assistant in Neurology.

The general plan of instruction in neurology follows the usual evolution of student teaching. The purely academic knowledge gained in the first year is gradually animated by clinical life and in the student there is developed the capacity to elicit symptoms, to measure their value and to draw logical conclusions from them.

Ample material is supplied for this course by the wards of the University Hospital, the University wards of the San Francisco Hospital, and particularly at the nerve clinic, to which over 6500 visits have been paid in the past year.

*Second Year.*—In the second half of the second year the knowledge of anatomy and physiology taught in the first half-year will be applied to clinical cases. The methods of history taking, of making routine neurologic examinations, and the main facts of general neurology will find their special place in this course.

*Third Year.*—Throughout this year there will be a systematic course in special neurology, which will be illustrated with an abundance of clinical material. In the second half-year students are assigned to cases and every opportunity is given for thorough work. In this year a systematic course of lectures on the more important mental diseases is also given.

*Fourth Year.*—Work in this department is elective.



## SECOND YEAR

## 101. Elementary Clinical Neurology.

Second half-year, once a week.

Dr. HARVEY.

16 hours.

## THIRD YEAR

## 102A-102B. Lectures and Demonstrations in Clinical Neurology.

First and second half-years, once a week.

Dr. LENNON.

32 hours.

## 103A-103B. Clinical Lectures in Psychiatry.

First and second half-years, once a week.

Drs. RICHARDS and PODSTAT.

32 hours.

## 104. Section Work.

Second half-year.

Drs. LENNON and HARVEY.

Each student, 32 hours.

For electives in this department see page 87.

## DERMATOLOGY AND SYPHILOLOGY

HOWARD MORROW, M.D., Clinical Professor of Dermatology.

L. S. SCHMITT, B.S., M.D., Assistant Clinical Professor of Syphilology.

A. W. LEE, M.D., Instructor in Dermatology.

BERTEAM STONE, M.D., Assistant in Dermatology.

Instruction in this department is carried on during the last half of the second year and throughout the third year.

*Second Year.*—In the second half of this year a course in clinical lectures and demonstrations is intended to teach the student to observe objective symptoms and describe them correctly. The common diseases of the skin will be demonstrated.

*Third Year.*—Throughout this year a systematic course will cover the histopathology, diagnosis, and treatment of diseases of the skin. Students are taken to the Isolation Hospital, where leprosy and the exanthemata are demonstrated.

In the second half of this year a course of lectures and recitations will cover syphilis in all its phases. The clinical and laboratory procedures used in its diagnosis will also be discussed.

*Fourth Year.*—In the second half-year work in this department is elective.

**SECOND YEAR**

101. **Clinical Lectures and Recitations.** Professor MORROW.  
Second half-year, once a week. 16 hours.

**THIRD YEAR**

- 102A-102B. **Clinical Lectures and Demonstrations.** Professor MORROW.  
First and second half-years, once a week. 32 hours.
103. **Syphilology; Lectures and Recitations.**  
Assistant Professor SCHMITT.  
Second half-year, once a week. 16 hours.  
For electives in this department see page 87.

**LEGAL MEDICINE**

A. A. D'ANCONA, A.B., M.D., Lecturer in Forensic Medicine.

*Third Year.*—In this department students receive instruction in the legal aspects of medicine. In general the course covers the following subjects: (1) technique of medico-legal post-mortem examinations; (2) toxicology from the chemical and legal points of view; (3) biological aspects; (4) legal regulation of medical practice, rules of evidence, etc. In order to set forth the various points of view of this subject, this course is given by several lecturers.

**THIRD YEAR**

- 101A-101B. **Lectures.**  
First and second half-years, once a week. 32 hours.

**PEDIATRICS**

WILLIAM PALMER LUCAS, A.B., M.D., Professor of Pediatrics.  
RACHEL L. ASH, B.S., M.D., Instructor in Pediatrics.  
OLGA BRIDGMAN, Ph.D., M.D., Instructor in Pediatrics.  
VIVIA BELLE APPLETON, A.B., M.D., Instructor in Pediatrics.  
E. CHARLES FLEISCHNER, M.D., Instructor in Pediatrics.  
LOUISE MORROW, A.B., M.D., Head of Social Service Department and Lecturer in Medical Social Economics.  
ETHEL M. WATTERS, A.B., M.D., Assistant in Pediatrics.  
MABEL F. GIFFORD, Assistant in Pediatrics, in charge of Speech Defect Clinic.

HUGH K. BERKLEY, M.D., Assistant in Pediatrics.

ALFRED E. MEYERS, A.B., M.D., Assistant in Pediatrics.

ADOLPH G. SCHNACK, A.M., M.D., Assistant in Pediatrics.

WILLIAM A. WOOD, M.D., Assistant in Pediatrics.

SHERMAN A. WHITE, D.D.S., Voluntary Assistant in Pediatrics.

The work in this department extends throughout the third year and the first half of the fourth year. The course consists of lectures, clinical exercises, and laboratory work.

The teaching material of the department is drawn from the following sources:

(1) The nursery and children's wards of the University Hospital, which give opportunities for studying normal breast feeding, the problems entering into the first two weeks of life and the diseases of infancy and childhood admitted into the general children's wards. (2) The Out-Patient Department of the University Hospital offers special opportunities for following normal feeding cases in the special feeding clinic and various ambulatory diseases of infancy and childhood only to be found in a large children's clinic. (The Children's Out-Patient Department had a total of 10,349 visits during the last year, which gave a large amount of most interesting material.) Home visits are made where the home conditions are of importance or the patient's condition indicates it. (3) The medical wards of the Children's Hospital. (4) The children's ward of the San Francisco Hospital during ten weeks of the first half-year. (5) The Isolation Hospital, where every variety of contagious disease can be demonstrated. (6) Those desiring and qualified can take special work at various institutions, such as the Juvenile Court, the State Home for Feeble Minded at Eldridge, and other institutions doing child-welfare work.

During the year a series of lectures will be given on subjects closely related to pediatrics and child-welfare work by specialists in their particular fields.

*Third Year.*—The work is divided into lectures and clinical exercises dealing with prenatal studies, normal development of the infant, normal breast feeding, substitute feeding, the physiology and metabolism of infancy and childhood. The various diseases of infancy and childhood are demonstrated as far as the clinical material will permit. Laboratory exercises relating to physiology and digestion and preparation of milk formulas are taken up, either during the required or elective courses. Especial attention is given to the psychological, sociological, and preventive problems of infancy and childhood. The problems of the defective, delinquent, and psychopathic child and of adolescence are studied

in conjunction with the departments of Psychology and Social Economics. Through close co-operation with these departments special lines of work are offered both in psychology and social economics. These departments furnish lecturers and assistants on special topics relating to childhood. Through co-operation with child-welfare institutions of the state and city opportunity to study these institutions is given.

*Fourth Year.*—During the first half-year classes are divided into small sections for work in the Out-Patient Department and wards of the University Hospital, Children's Hospital, and in the San Francisco Hospital during the ten weeks of pediatric service. During the last half-year work in this department is elective.

### THIRD YEAR

101. Lectures, Recitations, Laboratory Work, and Clinical Demonstrations.  
Professor LUCAS and Staff.  
First half-year, twice a week. 64 hours.

102. Section Work. Professor LUCAS and Staff.  
Second half-year. Each student, 32 hours.

### FOURTH YEAR

103. Ward Work. Professor LUCAS and Staff.  
First half-year. Each student, 54 hours.

For electives in this department see page 88.

### SURGERY\*

WALLACE I. TERRY, B.S., M.D., Professor of Surgery.  
HAROLD BRUNN, M.D., Assistant Clinical Professor of Surgery.  
SAXTON T. POPE, M.D., Assistant Clinical Professor of Surgery.  
HOWARD C. NAFFZIGER, M.S., M.D., Instructor in Surgery.  
HERBERT S. THOMSON, B.S., M.D., Instructor in Surgery.  
LOUIS P. HOWE, M.D., Instructor in Surgery.  
ALANSON WEEKS, M.D., Instructor in Surgery.  
FAYETTE W. BIRTCH, A.B., M.D., Instructor in Surgery.  
EDWIN I. BARTLETT, A.B., M.D., Instructor in Surgery.  
DUDLEY TAIT, B.S., M.D., Assistant in Surgery.  
MARY E. BOTSFORD, M.D., Assistant in Surgery.  
CARL L. HOAG, M.S., M.D., Assistant in Surgery.

\* The Department of Surgery includes Orthopedic Surgery, Urology, Laryngology, Ophthalmology and Roentgenology.

EDNA L. BAENEY, M.S., M.D., Assistant in Surgery.

JOHN H. WOOLSEY, M.S., M.D., Assistant in Surgery.

ROBERT S. SHERMAN, M.S., M.D., Assistant in Surgery.

— — —, Assistant in Surgery.

CLARENCE A. WILLS, M.D., Voluntary Assistant in Surgery.

*Second Year.*—Instruction in surgery begins in the second half of the second year. This part of the course is aimed to give the student a broad view of the subject, to instill principles of surgical technic and to establish a foundation by means of a course in surgical pathology. The work of this half-year is carried on at the University Hospital and in the Out-Patient Department.

*Third Year.*—During this year systematic courses of lectures and recitations are begun. In the second half-year there are lectures and demonstrations in the physiology of respiration and circulation as related to surgery, the study of shock, and the effect of anaesthetics. At the San Francisco Hospital a conference course is carried on, in which the etiology, diagnosis, prognosis, pathology and treatment of surgical cases are discussed. The class is also divided into sections for work at the University and San Francisco hospitals.

*Fourth Year.*—During the first half of the fourth year the systematic lectures in surgery are continued, as well as the clinical work at the San Francisco Hospital. In addition students will act as ward clerks in the wards of the University and San Francisco hospitals. The work of the second half of the fourth year is elective.

#### SECOND YEAR

##### 101. Elementary Surgery: Lectures, Demonstrations, and Recitations.

Professor TERRY.

Second half-year, once a week.

32 hours.

##### 102. Surgical Technic.

Assistant Professor POPE.

Second half-year, once a week.

16 hours.

##### 103. Surgical Pathology.

Dr. BARTLETT.

Second half-year, twice a week.

48 hours.

##### 104. Section Work.

THE STAFF.

Second half-year.

Each student, 32 hours.

#### THIRD YEAR

##### 105. Surgical Lectures, Demonstrations, and Recitations.

Professor TERRY.

Second half-year, once a week.

32 hours.

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106. **Surgical Physiology.** Assistant Professor POPE.  
Second half-year, once a week. 16 hours.
- 107A-107B. **Surgical Recitations.**  
Assistant Professor POPE and Dr. NAFFZIGER.  
First and second half-years, once a week. 32 hours.
- 108A. **Section Work at University Hospital.** THE STAFF.  
First half-year. Each student, 64 hours.
- 108B. **Section Work at San Francisco Hospital.**  
Assistant Professor BRUNN, Drs. NAFFZIGER and HOWE.  
Second half-year. Each student, 64 hours.

FOURTH YEAR

111. **Surgical Lectures, Demonstrations, and Recitations.**  
Professor TERRY.  
A continuation of course 105.  
First half-year, twice a week. 32 hours.
110. **Clinical Demonstrations.** Assistant Professor BRUNN.  
First half-year (S. F. H.), twice a week. 32 hours.
111. **Section Work.**  
Assistant Professor BRUNN, Drs. NAFFZIGER and HOWE.  
First half-year (S. F. H.). Each student, 48 hours.
113. **Surgical Wards.** Dr. BIRCH.  
First half-year (U. C. H.). Each student, 48 hours.  
For electives in this department see pages 88 and 89.

ORTHOPEDIC SURGERY

WALTER I. BALDWIN, B.S., M.D., Instructor in Orthopedic Surgery, *in charge*.  
HOWARD H. MARKEL, A.B., M.D., Assistant in Orthopedic Surgery.  
ARTHUR L. FISCHER, A.B., M.D., Assistant in Orthopedic Surgery.  
— — —, M.D., Assistant in Orthopedic Surgery.  
FREDERICK H. ZUMWALD, M.D., Voluntary Assistant in Orthopedic Surgery.

*Fourth Year.*—The required work in this department is given in the first half of the fourth year. The work of the second half of the fourth year is elective. Instruction consists of lectures, clinical demonstrations, and section work in the wards and Out-Patient Department of the University Hospital and in the Children's Hospital.

FOURTH YEAR

101. **Lectures and Clinical Demonstrations.** Dr. BALDWIN  
First half-year, once a week. 16 hours.

## 102. Section Work.

Drs. BALDWIN, MARKEL, and FISHER.

First half-year.

*Each student, 32 hours.*

For electives in this department see page 89.

## LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY

ALBERT J. HOUSTON, B.L., M.D., Assistant Clinical Professor of Laryngology, Otology and Rhinology.

FREDERICK C. LEWITT, B.S., M.D., Instructor in Laryngology, Otology and Rhinology.

ABEL W. JOHNSON, A.M., M.D., Instructor in Laryngology, Otology and Rhinology.

HANS B. CHRISTIANSEN, M.D., Assistant in Laryngology, Otology and Rhinology.

JEROME B. THOMAS, A.B., M.D., Assistant in Laryngology, Otology and Rhinology.

HENRY HOEN, M.D., Assistant in Laryngology, Otology and Rhinology.

CONSTANTINE R. BRICCA, A.B., M.D., Assistant in Laryngology, Otology and Rhinology.

FRANCIS M. SHOOK, M.D., Voluntary Assistant in Laryngology, Otology and Rhinology.

The required work of this department is given in the third year and in the first half of the fourth year.

*Third Year.*—During the second half-year the major portion of this work is practical and is carried on in association with regular clinics in the Out-Patient Department of the University Hospital. The use of the various instruments is also taught.

*Fourth Year.*—During the first half-year students are assigned to the clinic in small sections. The work in the second half of the fourth year is elective.

## THIRD YEAR

## 101. Section Work.

Assistant Professor HOUSTON.

Second half-year.

*Each student, 32 hours.*

## FOURTH YEAR

## 102. Section Work.

Assistant Professor HOUSTON.

First half-year.

*Each student, 32 hours.*

For electives in this department see page 89.

## OPHTHALMOLOGY

WALTER SCOTT FRANKLIN, M.D., Assistant Clinical Professor of Ophthalmology.

WILLIAM F. BLAKE, A.B., M.D., Instructor in Ophthalmology.

EDWARD F. GLASER, M.D., Instructor in Ophthalmology.

— — —, M.D., Assistant in Ophthalmology.

Instruction is given in this department throughout the third year.

*Third Year.*—Throughout this year a systematic course of lectures and recitations is given, covering the more common diseases of the lids and globes. In the first half of this year the class is divided into sections for work in the Out-Patient Department.

*Fourth Year.*—Work in this department in the second half of the fourth year is elective.

### THIRD YEAR

101A-101B. Lectures and Recitations. Assistant Professor FRANKLIN.

First and second half-years, once a week. 32 hours.

102. Section Work Assistant Professor FRANKLIN and Dr. GLASER.

First half-year. Each student, 32 hours.

For electives in this department see page 89.

## UROLOGY

FRANK HINMAN, A.B., M.D., Instructor in Urology, *in charge*.

WILLIAM P. WILLARD, M.D., Instructor in Urology.

JOHN VAUGHAN LEONARD, M.D., Instructor in Urology.

LIONEL P. PLAYER, M.D., Instructor in Urology.

— — —, Assistant in Urology.

HARRY PARTRIDGE, M.D., Voluntary Assistant in Urology.

HUDSON SMYTHE, M.D., Voluntary Assistant in Urology.

Instruction in this department is given in the last half of the third year and in the first half of the fourth year, and consists of lectures, recitations, and instruction in the Out-Patient Department.

*Third Year.*—During the last half of the year a course of lectures and recitations deals with the anatomy, physiology and pathology of the genito-urinary tract.

*Fourth Year.*—During the first half-year students will serve as assistants in the Out-Patient Department.

The work of the last half-year is elective.



**THIRD YEAR****101. Lectures and Recitations in Urology.****Dr. HINMAN.**

Second half-year, once a week.

*16 hours.***FOURTH YEAR****102. Section Work.****THE STAFF.**

First half-year.

*Each student, 32 hours.*

For electives in this department see page 89.

**ROENTGENOLOGY****HOWARD E. BUGGLES, A.B., M.D.,** Assistant Clinical Professor of Roentgenology.**LLOYD BRYAN, B.S., M.D.,** Assistant in Roentgenology.

The required work in this department is given in the first half of the fourth year and consists of lectures and demonstration of plates.

**FOURTH YEAR****101. Lectures and Demonstrations.** Assistant Professor **BUGGLES.**

First half-year, once a week.

*16 hours.*

For electives in this department see page 89.

**OBSTETRICS AND GYNECOLOGY****FRANK W. LYNCH, A.B., M.D.,** Professor of Obstetrics and Gynecology.**R. KNIGHT SMITH, M.D.,** Assistant Clinical Professor of Obstetrics.**J. CRAIG NEEL, Ph.B., M.D.,** Instructor in Obstetrics and Gynecology.**WILLIAM G. MOORE, M.D.,** Instructor in Obstetrics and Gynecology.**LOUIS I. BREITSTEIN, B.S., M.D.,** Instructor in Obstetrics and Gynecology.

— — —, Instructor in Obstetrics and Gynecology.

**ALICE F. MAXWELL, B.S., M.D.,** Assistant in Obstetrics and Gynecology.**MARGARET SCHULZE, M.S., M.D.,** Assistant in Obstetrics and Gynecology.

Instruction in this department is given to students of the second, third, and fourth years. The work of the second and third years and first half of the fourth year is obligatory. The required courses include lectures, recitations, laboratory demonstrations, and practical work in the wards and Out-Patient Department in obstetrics and gynecology. Each student must attend at least twelve cases of confinement.

*Second Year.*—The work of the second year is introductory and includes the study of the normal anatomy and physiology of the female generative organs.

*Third Year.*—Normal pregnancy, labor, and the puerperium are considered during the first half of the third year, following which the courses deal on one hand with obstetrical complications and on the other hand with gynecological diseases.

The woman's clinic of the University Hospital has fifty beds for obstetric and gynecologic patients and thus offers a splendid opportunity for combining clinical instruction in these subjects and for demonstrating the close relationship which exists between them. Other clinical opportunities are afforded by the obstetrical and gynecological service at the San Francisco Hospital.

*Fourth Year.*—The work of the second half of the fourth year is elective.

#### SECOND YEAR

101. **Introductory Lectures.** Professor LYNCH.  
Second half-year, twice a week. 32 hours.

#### THIRD YEAR

- 102A-102B. **Lectures and Recitations in Obstetrics.**  
Professors LYNCH and SMITH, Drs. NEEL and BREITSTEIN.  
First half-year, five times a week. 80 hours.  
Second half-year, twice a week. 48 hours.

103. **Gynecological Pathology.** Dr. NEEL.  
Second half-year, once a week. 32 hours.

104. **Lectures and Recitations in Gynecology.**  
Professor LYNCH, Drs. NEEL and MOORE.  
Second half-year, three times a week. 48 hours.

#### FOURTH YEAR

109. **Section Work in Gynecology.** Dr. NEEL.  
First half-year. Each student, 32 hours.  
For electives in this department see page 90.

**FOURTH-YEAR ELECTIVES**

The last half of the fourth year has been set aside for electives. *A minimum of 560 hours is demanded.* Electives are arranged as double courses and single courses. A *double course* occupies the entire day for one month or forenoons or afternoons for two months, and has a value of 140 hours. A *single course* occupies a half day for one month and has a value of 70 hours.

Students who desire to specialize in any major branch of medical study may elect more than one of the courses offered in a given subject, but no student will be allowed to devote his whole elective period to one subject without special permission of the Advisory Board of the Faculty and the consent of the head of the department concerned.

Students electing research work which necessarily is prolonged beyond the time designated for that subject will be permitted to finish it provided the time required does not extend beyond the half-year. The permission of the Advisory Board of the Faculty will be necessary to carry out this arrangement.

The final choice of electives must be left at the Secretary's office on or before December 1, 1917. No changes will be allowed after the final arrangement is made. The time allotted for electives, together with the schedule thereof, must be determined by the Secretary of the Medical School, and the Faculty reserves the right to make any changes deemed necessary in the selection and arrangement of the courses chosen by the student.

Examinations will be held at the end of each course, for the most part practical, and the grade assigned to each student will be sent to the Secretary's office as soon as the course has terminated.

The value of the courses, as stated above, when elected in anatomy, physiology, biochemistry, pathology and bacteriology, or research medicine, must depend on arrangement with the heads of the departments concerned.

**ANATOMY****209. Human Embryology.**

Professor EVANS.

Opportunity is offered for the study of specific problems in human embryology. The collections of both human and comparative embryological material are constantly being augmented. The elective is offered only to students familiar with vertebrate embryology.

*Hours to be arranged.*

**\*210. History of Anatomy.**

Assistant Professor CORNER.

Informal conferences upon the history and literature of anatomy and its relation to the progress of general medical knowledge, illustrated by old books and figures. Limited to six students, one hour weekly.

*Hours to be arranged.*

**211. Physiological Anatomy of Reproduction.**

Assistant Professor CORNER.

Informal conferences and demonstrations. The oestrous cycle, implantation, comparative placentation, etc. Outside reading required. One hour weekly.

*Hours to be arranged.*

**212. Experimental Embryology.**

Dr. SMITH.

Conferences and original work by the experimental method chiefly with amphibian material on problems of developmental mechanics.

*Hours to be arranged.*

**213. Original Investigation.**

Professor EVANS and other members of the staff.

Students and others who are prepared to undertake research in any of the anatomical sciences will be given facilities and encouragement by members of the staff.

*Hours optional.*

**214. Seminar.**

Topics will be discussed by the staff and those electing the course.

For the year 1916-17 topics will be chosen from the field of human and comparative embryology.

*Hours to be arranged.*

**PHYSIOLOGY**

**110. Experimental Biology.**

Dr. WULZEN.

Special problems in cell physiology and the tropisms. Designed to give introductory training in methods of research.

*Hours to be arranged.*

**111. Advanced Physiology.**

Associate Professor MAXWELL.

Some simple piece of research is repeated and extended in connection with a study of the original literature on the subject.

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\* Not to be given 1917-18. This course will be given alternately with course 211.

**212. Research in Physiology.**

Associate Professor MAXWELL.  
*Hours and subjects to be arranged.*

**214. Journal Club.**

The Department Staff.

Discussion of important advances in physiology, reports of research in the department, and abstracts of current papers. Open only to advanced students who have a reading knowledge of French and German. Applications for membership should be made to Professor Maxwell.

**BIOCHEMISTRY AND PHARMACOLOGY****110. Advanced Chemical Biology.**

Professor ROBERTSON.

Special topics may be selected by the student in conference with Professor Robertson.

**210. Research in Biochemistry.**

Professor ROBERTSON.

Open to qualified students who have the necessary time at their disposal. The subject and the time to be devoted to it, to be arranged in conference with Professor Robertson.

**211. Research in Pharmacology.**

Associate Professor WASTENEYS.

Open to qualified students who have the necessary time at their disposal. The subject and the time to be devoted to it, to be arranged in conference with Professor Wasteney.

**PATHOLOGY AND BACTERIOLOGY****201. Research; Problems of Infection and Immunity.**

Professor GAY.

*Hours to be arranged.*

**202. Research; Neuropathology.**

Associate Professor RUSK.

*Hours to be arranged.*

**203. Research; Bacteriology and Protozoology.**

Assistant Professor HALL.

The investigation of concrete problems suggested by the work in medical bacteriology.

*Hours and units to be arranged.*

**204. Advanced Morbid Anatomy and Histopathology.**

Assistant Professor COOKE.

An elective course for fourth-year and graduate students in medicine, comprising autopsy technic and the working up of tissues and cultures resulting from post-mortem examination. University Hospital.

*Hours to be arranged.*

**205. Experimental Pathology.** Associate Professor RUSK and Dr. —.

Experiments illustrating functional changes as evidenced by chemical and physiological methods and tissue alterations; results demonstrated in course 104. Special problems. Open to qualified students and graduates by special arrangement.

*Hours to be arranged.*

**206. Immunochemistry. Seminar.**

Dr. SCHMIDT.

Consideration and discussion of the physical-chemical aspects of the subject of immunity. Informal discussion and presentation of current problems.

*Hours to be arranged.*

**PREVENTIVE MEDICINE AND HYGIENE**

**201. Preventive Medicine.**

By arrangement with the State Board of Health a limited number of properly qualified students will be given an opportunity to work as volunteer assistants in the Bureau of Communicable Diseases. The nature of the work will depend upon the kind of investigations which are being carried on at the time of the service. The work will include both laboratory and field service. A problem will be assigned to the student and a written report will be required. The problem will be one of the following:

(a) A sanitary survey of a city or town.

(b) The field and laboratory investigation of a public-health problem.

(c) The investigation and control of an epidemic.

To derive the best benefit from the course the student should be prepared to pay traveling expenses.

Double course.

**MEDICINE**

**201. Clinical Medicine (U. C. H.).**

In the wards of the University Hospital opportunity will be offered four students to serve as clinical clerks. Their work will be under the supervision of Professor Moffitt.

Double course, mornings only; limited to four students.

**202. Clinical Medicine (S. F. H.).**

Students will act as clinical clerks in the wards of the San Francisco Hospital, under the supervision of a member of the department.

Single or double course.

**203. Clinical Medicine (O. P. D.).**

Students will act as clinical clerks in the Out-Patient Department of the University Hospital. Opportunity is also afforded a number of students to study the use of the polygraph and the electrocardiograph.

Single or double course, mornings only; limited to four students each month.

**204. Clinical Medicine (Wards, U. C. H.).**

Students will act as clinical clerks in the wards of the University Hospital. This work will be under the supervision of members of the department and will include such laboratory studies of the patients as are necessary.

Single or double course, afternoons only; limited to four students.

**205. Tuberculosis.**

This course will comprise individual teaching in the taking of histories, the correlation of symptomatology and physical signs, the differential diagnosis of pulmonary tuberculosis by means of physical examination, radiograms, and special laboratory technic. The treatment of tuberculosis and its complications will be considered with special reference to the modern development of specific therapy. The broader view of tuberculosis in reference to its economic and sociologic aspects will be given emphasis. This course will be offered in the tuberculosis wards of the San Francisco Hospital by Assistant Professor Evans. Students will also be instructed in special laboratory examinations of sputum, blood, exudates, etc., in connection with the clinical material of the wards.

Single or double course.

**206. Research in Clinical Medicine.**

Through the co-operation of the staff of the Hooper Foundation opportunity will be offered to two or three students to work on some research problem connected with the material of the medical wards.

Double course; limited to three students.

**207. Clinical Lectures.**

A series of clinical lectures on tumors will be offered by Professor Moffitt one hour a week, Saturday mornings.

**208. Advanced Work in Laboratory Diagnosis.**

Lectures and demonstrations including some of the more advanced methods of clinical examination which are beyond the scope of the required work in clinical pathology. A study will be made of the methods of testing the functional capacity of the kidneys, liver and pancreas, and the diagnostic value, interpretation and limitations of such tests will be discussed. The course will include also a consideration of the more useful methods of studying abnormalities in blood coagulation, particular emphasis being laid upon the differentiation of the various hemorrhagic diseases. Whenever possible illustrative cases will be shown. This course is offered by Dr. Hurwitz.

**NEUROLOGY AND PSYCHIATRY**

**201. Neurology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**202. Psychiatry.**

Instruction will be given in history taking, mental examination and psychanalysis, the correlation of physical signs and laboratory findings with the manifestations of mental disorders, the etiology, symptomatology, diagnosis and treatment of mental diseases.

Single or double course.

**DERMATOLOGY**

**201. Dermatology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants. Opportunity is also afforded for the preparation and examination of biopsies and for the study of the bacteriology of the skin.

Single or double course.



**PEDIATRICS****201. Pediatrics.**

An elective course in pediatrics will be open to fourth-year students in the wards of the University and Children's hospitals and in the Out-Patient Department of the University Hospital. This course consists of case teaching, in which students will be expected to do all the work in connection with the patients assigned them. This includes doing the laboratory work, looking up all the available literature and keeping bedside records. Ward talks and demonstrations in the laboratory and special case-histories covering conditions not observed in the ward during the time the course is in progress will be given. Students electing double courses may be allowed to take special problems or to do work in special institutions. Not more than four students may elect work in the same institution during any one period. Those electing double courses will be given the preference.

Single or double course.

**SURGERY****201. Surgery (U. C. H.).**

The students will act as clinical clerks in the wards and Out-Patient Department of the University Hospital. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited. This course must be elected for the entire day.

Double course.

**202. Surgery (S. F. H.).**

The students will act as clinical clerks in the wards of the San Francisco Hospital. They will also assist in operations or administer anesthetics under the supervision of the members of the department. The number of students electing this course will be limited.

Single or double course.

**203. Neurological Surgery.**

The students will devote their time primarily to the physiology and diagnosis of surgical diseases of the nervous system, and to work in surgery of the peripheral and central nervous system. When not so occupied, students will act as clinical clerks in the wards of the University or San Francisco Hospital.

Single or double course.

**204. Surgical Pathology.**

A research course in subjects to be assigned.

Single course.

**205. Emergency Surgery.**

Students will act as clinical clerks in the emergency service at the San Francisco Hospital. Students electing this course must take a double course for the entire day.

Double course.

**ORTHOPEDIC SURGERY**

**201. Orthopedic Surgery.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**UROLOGY**

**201. Urology.**

This course consists of an advanced study of kidney diseases, including renal diagnosis and functional tests. Students also serve as assistants in the Out-Patient Department of the University Hospital and at the San Francisco Hospital, particular attention being paid to cystoscopy and ureteral catheterization.

Single or double course.

**202. Research in Urology.**

Hours and subjects to be arranged.

**OPHTHALMOLOGY**

**201. Ophthalmology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY**

**201. Laryngology, Otology and Rhinology.**

This course consists of advanced work in the Out-Patient Department, the students acting as clinical assistants.

Single or double course.

**ROENTGENOLOGY**

**201. Roentgenology.**

Students will be assigned to assist in technical work under the direction of Dr. Ruggles.

Single or double course.

**OBSTETRICS AND GYNECOLOGY****201. Obstetrics and Gynecology.**

A practical course including work in the Out-Patient Department, the wards, and the operating room. Students will act as clinical clerks in the wards and as assistants in the operating room.

Single or double course.

**202. Obstetrics and Gynecology.**

A practical course including work at the San Francisco Hospital. Students will act as clinical clerks in the wards and as assistants in the operating room.

Single or double course.

## **SCHEDULES AND LIST OF STUDENTS**



**SCHEDULES, 1917-18**

**FIRST YEAR  
FIRST HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9						
9-10						
10-11	Histology EVANS SCOTT	Anatomy MOODY CORNER	Histology EVANS SCOTT	Anatomy MOODY CORNER	Histology EVANS SCOTT	Anatomy MOODY CORNER
11-12						Histology Lecture EVANS
1-2						
2-3						
3-4	Anatomy MOODY CORNER	Anatomy MOODY CORNER	Anatomy MOODY CORNER	Anatomy MOODY CORNER	Anatomy MOODY CORNER	
4-5						

**FIRST YEAR  
SECOND HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9					Neurology Lecture SMITH	
9-10	Physiology Laboratory	Physiology Laboratory	Physiology Laboratory	Physiology Laboratory	Biochemistry Lecture ROBERTSON	Physiology Laboratory
10-11					Physiology Lecture BURNETT	
11-12	Physiology Lecture BURNETT	Physiology Lecture MAXWELL	Physiology Lecture MAXWELL	Physiology Lecture MAXWELL		Physiology Lecture MAXWELL
1-2	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON	Biochemistry Lecture ROBERTSON		
2-3					Neurology Laboratory SMITH SCOTT	
3-4	Biochemistry Laboratory	Biochemistry Laboratory	Biochemistry Laboratory	Biochemistry Laboratory		
4-5						



**SECOND YEAR  
FIRST HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9		Topographical Anatomy COENEN SCOTT (Electives) EVANS	Morbid Anatomy and Histopathology RUSK	Morbid Anatomy and Histopathology RUSK	Topographical Anatomy COENEN SCOTT (Electives) EVANS	Morbid Anatomy and Histopathology RUSK
9-10	Morbid Anatomy and Histopathology RUSK					
10-11		Autopsy Section RUSK		Autopsy Section RUSK		
11-12	Immunology Lecture GAY		Immunology Lecture GAY			
1-2			Topographical Anatomy MOODY SCOTT (Electives) EVANS			
2-3	Bacteriology and Immunology GAY HALL	Bacteriology and Immunology GAY HALL		Bacteriology and Immunology GAY HALL	Bacteriology and Immunology GAY HALL	
3-4						
4-5						

**SECOND YEAR  
SECOND HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Surgical Technic FORZ			Surgery TERRY	Clinical Physiology KILGORE	
9-10	Dermatology Lectures MONROE	Medicine MORFITT	Section Work Surgery	Surgery HOAG	Physical Diagnosis	Surgical Pathology BARTLETT
10-11						Neurology LENNON
11-12	Surgical Pathology BARTLETT	Physical Diagnosis	Obstetrics Lectures and Recitations LYNCH	Physical Diagnosis	Obstetrics Lectures and Recitations LYNCH	Materia Medica Lectures and Demonstrations SCHNEIDER
12-1	Pharmacology Lectures WATSON		Pharmacology Lectures WATSON			
2-3	Prevent. Medicine and Hygiene Lectures CUMMINGS				Pharmacology Laboratory (Berkeley)	
3-4	Materia Medica Lectures and Demonstrations SCHNEIDER	Clinical Pathology HUNWITZ		Clinical Pathology HUNWITZ		
4-5						
5-6	Homeopathic Materia Medica (Elective) BROOKS			Homeopathic Materia Medica (Elective) BROOKS		

**THIRD YEAR  
FIRST HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Neurology Clinical Lectures LENNON	Therapeutics KILGORE		Therapeutics KILGORE		
9-10	Medicine Clinical Lectures MOFFITT	Ophthalmology Lectures FRANKLIN	Dermatology MORROW	Medicine Clinical Lectures MOFFITT	Surgery Recitations POPE NAFFZIGER	Therapeutics KILGORE
10-11	<p style="text-align: center;"><b>SECTION WORK</b> Medicine, Surgery, and Ophthalmology at U. C. H. (See section schedule)</p>					
11-12						
12-1						
		Obstetrics Lectures SMITH	Obstetrics Lectures SMITH	Obstetrics Lectures SMITH		Psychiatry Lectures PODSZATA Obstetrics Lectures SMITH
2-3	Obstetrics Lectures SMITH	Pediatrics Lectures and Demonstrations LUCAS		Pediatrics Lectures and Demonstrations LUCAS	Materia Medica Lectures SCHENKES Applied Homeopathy (elective) HILL	
3-4	Applied Homeopathy (elective) HILL					
4-5		Pathological Demonstrations COOK		Pathological Demonstrations COOK	Forensic Medicine D'ANCONA	

**THIRD YEAR  
SECOND HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Neurology Clinical Lectures LENNON	Surgical Physiology POPE	Surgery Lectures and Demonstrations TERRY	Gynecology Lectures LYNOH NEEL	Surgery Recitations POPE NAPFINGER	Surgery Lectures and Demonstrations TERRY
9-10	Medicine Clinical Lectures MOFFITT	Ophthalmology Lectures FRANKLIN	Dermatology Clinical Demonstrations MORROW	Medicine Clinical Lectures MOFFITT	Syphilology Lectures and Demonstrations SCHMITT	Gynecology Lectures LYNOH NEEL
10-11	<p style="text-align: center;"><b>SECTION WORK</b>   <b>Pediatrics, Throat, and Neurology</b>  <b>at U. C. Hospital</b>  <b>Medicine and Surgery</b>  <b>at S. F. Hospital</b>  <b>(See section schedule)</b></p>					
11-12						
12-1						
	<p style="text-align: center;"><b>Psychiatry</b> Lectures RICHARDS</p>					
	<p style="text-align: center;"><b>Urology</b> Lectures and Demonstrations HINMAN</p>					

2-8	Gynecological Pathology NEEL	Gynecology Lectures LYNOH NEEL		Obstetrics Lectures LYNOH	Obstetrics Demonstrations BREITSTEIN	
3-4		Pathological Demonstrations COOKE		Therapeutics KILGORE		
4-5	Applied Homoeopathy ( <i>elective</i> ) HILL	Applied Homoeopathy ( <i>elective</i> ) HILL		Pathological Demonstrations COOKE	Forensic Medicine D'ANCONA	

**FOURTH YEAR  
FIRST HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9		Medicine Clinical Demonstrations S. F. H. EBRIGHT	Surgery Lectures and Demonstrations TERRY	Medicine Clinical Demonstrations S. F. H. EBRIGHT		Surgery Lectures and Demonstrations TERRY
8-9:30		Surgery Clinical Demonstrations S. F. H. BRUNN		Surgery Clinical Demonstrations S. F. H. BRUNN		Roentgenology RUGGLES
9:30-10						Orthopedic Surgery BALDWIN
10-11						
11-12						
12-12:30						
12:30-1						

SECTION WORK  
Orthopedic Surgery, Urology, Throat, etc., and Gynecology  
at U. C. Hospital  
Medicine and Surgery  
at S. F. Hospital  
(See section schedule)

2-3	SECTION WORK Medicine, Surgery, and Pediatrics Wards U. C. H. (See section schedule)		SECTION WORK Medicine, Surgery, and Pediatrics Wards U. C. H. (See section schedule)
3-4			
4-5			

## DEGREES CONFERRED MAY, 1917

Frank Philip Brendel.....	Sacramento
1376 Third av, San Francisco.	
Pini Joseph Calvi, B.S.....	San Jose
1116 Clay st, San Francisco.	
Allan Largess Cohn, B.S.....	San Francisco
2436 Clay st, San Francisco.	
Mendel Leopold Cohn, B.S.....	Placerville
2630 Piedmont av, Berkeley.	
Orrin S. Cook, B.S.....	Lodi
245 S. Pleasant av, Lodi.	
Charles Alfred Oraig.....	Lakeport
450 Irving st, San Francisco.	
Jewel Fay, B.L.....	Berkeley
5222 Broadway Terrace, Oakland.	
Howard Webster Fleming, B.S.....	San Jose
471 E. Santa Clara av, San Jose.	
William Christensen Frey.....	Modesto
1275 Third av, San Francisco.	
James Ernest Harvey.....	Los Angeles
1624 Wilton Place, Los Angeles.	
Robert Harold Heaney, A.B.....	San Francisco
4287 Twenty-third st, San Francisco.	
Mervyn Heller Hirschfeld, B.S.....	San Francisco
731 Duboce av, San Francisco.	
Merrill Windsor Hollingsworth, B.S.....	Los Angeles
1721A Scott st, San Francisco.	
Horace Hoagland McCoy, B.S.....	Beaumont
2200 Post st, San Francisco.	
Emma Mehlmann, B.L.....	San Luis Obispo
San Francisco Relief Home, San Francisco.	
Hiram Edgar Miller, A.B.....	Elk Grove
1420 Fifth av, San Francisco.	
Vinton Adolf Muller.....	Nevada City
1420 Fifth av, San Francisco.	
Hugh Elmer Penland, B.S.....	Berkeley
2350 Woolsey st, Berkeley.	
Alma Stevens Pennington, B.S.....	San Francisco
2828 Folsom st, San Francisco.	
Elizabeth Schulze, B.S.....	Berkeley
1731 Carlton st, Berkeley.	
Lewis Seligman.....	Dinuba
1278 Fourth av, San Francisco.	
Alson Anderson Shufelt.....	Reno, Nev.
2520 Twenty-fourth av, San Francisco.	

Daniel Warren Sooy.....	North San Juan
2119 Clinton av, Alameda.	
William Wallace Washburn, B.S.....	Putney, Vermont
1420 Fifth av, San Francisco.	
John Chilton Williams, B.S.....	Fresno
1980 University av, Berkeley.	
Elmo Russell Zumwalt.....	Richmond
336 Eighth st, Richmond.	

## STUDENTS, SESSION 1916-1917

(Corrected to May, 1917)

## FOURTH YEAR

Frank Philip Brendel .....	Sacramento
1376 Third av, San Francisco.	
Pini Joseph Calvi, B.S. ....	San Jose
1116 Clay st, San Francisco.	
Allan Largess Cohn, B.S. ....	San Francisco
2436 Clay st, San Francisco.	
Mendel Leopold Cohn, B.S. ....	Placerville
2630 Piedmont av, Berkeley.	
Orrin S. Cook, B.S. ....	Lodi
245 S. Pleasant av, Lodi.	
Charles Alfred Craig .....	Lakeport
450 Irving st, San Francisco.	
Jewel Fay, B.L. ....	Berkeley
5222 Broadway Terrace, Oakland.	
Howard Webster Fleming, B.S. ....	San Jose
471 E. Santa Clara av, San Jose.	
William Christensen Frey .....	Modesto
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1624 Wilton Place, Los Angeles.	
Robert Harold Heaney, A.B. ....	San Francisco
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Mervyn Heller Hirschfeld, B.S. ....	San Francisco
731 Duboce av, San Francisco.	
Merrill Windsor Hollingsworth, B.S. ....	Los Angeles
1721A Scott st, San Francisco.	
Horace Hoagland McCoy, B.S. ....	Beaumont
2200 Post st, San Francisco.	
Emma Mehlmann, B.L. ....	San Luis Obispo
San Francisco Relief Home, San Francisco.	
Hiram Edgar Miller, A.B. ....	Elk Grove
1420 Fifth av, San Francisco.	

Vinton Adolf Muller .....	Nevada City
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Elizabeth Schulze, B.S. ....	Berkeley
1731 Carlton st, Berkeley.	
Lewis Seligman .....	Dinuba
1278 Fourth av, San Francisco.	
Alson Anderson Shufelt .....	Reno, Nev.
2520 Twenty-fourth av, San Francisco.	
Daniel Warren Sooy .....	North San Juan
2119 Clinton av, Alameda.	
William Wallace Washburn, B.S. ....	Putney, Vermont
1420 Fifth av, San Francisco.	
John Chilton Williams, B.S. ....	Fresno
1980 University av, Berkeley.	
Elmo Russell Zumwalt .....	Richmond
336 Eighth st, Richmond.	

## THIRD YEAR

Mary Isabella Armstrong, A.B. ....	Piedmont
112 Bonita av, Piedmont.	
Thomas Floyd Bell, A.B. ....	Oakland
1379 Fifth av, San Francisco.	
Charles Barrows Bennett, M.A., Sc.M., Ph.D. ....	Berkeley
Physiology Building, University of California.	
Robert Wilson Binkley, A.B. ....	Santa Ana
1251 Second av, San Francisco.	
Florence Josephine Chubb, B.L. ....	Bakersfield
1212 First av, San Francisco.	
*Earle J. Clark, B.S. ....	Seattle, Wash.
1917 Ferry av, Seattle.	
Frederick Carl Cordes, A.B. ....	Los Angeles
1251 Second av, San Francisco.	
Henry Chipman Dodge, A.B. ....	Stockton
1308 Fifth av, San Francisco.	
Charles Louis Freytag, A.B. ....	San Rafael
1283 Second av, San Francisco.	
Walter Herbert Frolich, A.B. ....	San Francisco
330 Willard st, San Francisco.	

\* Absent on leave, 1916-17.



Cavins Deter Hart, A.B. ....	Colusa
131 Hugo st, San Francisco.	
Mary Ruth Hill, A.B. ....	Carson City, Nevada
131 Hugo st, San Francisco.	
Harold Homer Hitchcock, A.B. ....	Berkeley
1308 Fifth av, San Francisco.	
†George Stevenson Holeman, A.B. ....	Riverside
775 Cole st, San Francisco.	
William Patrick Joseph Lynch ....	Stockton
131 Hugo st, San Francisco.	
John Gray McQuarrie ....	Beaver City, Utah
2909 Adeline st, Berkeley.	
Sidney Olsen, A.B. ....	Riverside
1420 Fifth av, San Francisco.	
Ralph Rabinowitz, A.B. ....	San Francisco
1714 Steiner st, San Francisco.	
Ethel Lucia Righetti, B.S. ....	San Francisco
305 Walnut st, San Francisco.	
Homer Righetti, A.B., M.S. ....	San Francisco
305 Walnut st, San Francisco.	
William Dan Sink, A.B. ....	Oakland
1251 Second av, San Francisco.	
William Otto Solomon, A.B. ....	Eureka
131 Hugo st, San Francisco.	
Laurence Taussig, A.B., M.S. ....	San Francisco
2450 Fulton st, San Francisco.	
Fletcher Brandon Taylor, A.B., M.S. ....	Pasadena
1420 Fifth av, San Francisco.	

## SECOND YEAR

Philip Howard Arnot, A.B. ....	Placerville
1251 Second av, San Francisco.	
Dorothy Wells Atkinson, A.B. ....	Tacoma, Washington
1278 Fourth av, San Francisco.	
Thomas Fred Ayres, B.S. ....	San Francisco
1006 Page st, San Francisco.	
Arthur Elmer Belt, A.B. ....	Huntington Park
1367 Third av, San Francisco.	
Alfred Poyncer Briggs, B.S. ....	Los Angeles
1251 Second av, San Francisco.	
Edwin Louis Bruck, A.B. ....	St. Helena
1251 Second av, San Francisco.	
Ruth Burr, A.B. ....	Sacramento
139 Hugo st, San Francisco.	

† In attendance, first half-year.

Alma Locke Cooke, B.S. ....	Oakland
139 Hugo st, San Francisco.	
†Chester Arthur DeLancey, A.B. ....	Oakland
625 Sycamore st, Oakland.	
Charles Beebe Fowler, A.B. ....	San Francisco
1230 Leavenworth st, San Francisco.	
Mervyn Francis Frandy, A.B. ....	Nevada City
270 Carl st, San Francisco.	
†Cletus Henry Graves ....	Pennington
1811 Hearst av, Berkeley.	
Charles Clarke Hall, A.B. ....	Portland, Oregon
1489 Fifth av, San Francisco.	
Lloyd Elliott Hardgrave ....	Taylorville
El Granada Apartments, Berkeley.	
Heinz G. Hummel, A.B. ....	Bayreuth, Germany
139 Hugo st, San Francisco.	
Thomas Waterman Huntington, Jr., A.B. ....	San Francisco
2629 Pacific av, San Francisco.	
Charles Edward Locke, Jr., A.B. ....	Los Angeles
1251 Fifth av, San Francisco.	
Frederick George Maggs ....	San Francisco
55 Alpine Terrace, San Francisco.	
Robert Carson Martin, A.B. ....	Portland, Oregon
1251 Second av, San Francisco.	
Belle Ellingsen Merrill ....	Oakland
139 Hugo st, San Francisco.	
Oscar Kempfer Mohs, A.B. ....	San Leandro
1251 Second av, San Francisco.	
Lois Pendleton, A.B. ....	Berkeley
139 Hugo st, San Francisco.	
Alverda Elva Reische, A.B. ....	Meridian
139 Hugo st, San Francisco.	
George Konhall Shew, A.B. ....	San Jose
1739 Carlton st, San Francisco.	
Harry Pratt Smith ....	Oakland
1332 Sixth av, San Francisco.	
†James McGeough Sullivan, A.B. ....	San Francisco
759 Buena Vista av, San Francisco.	
Bert Stanford Thomas, A.B. ....	San Francisco
2869 Bush st, San Francisco.	
Harold Guyon Trimble ....	Oakland
386 Oakland av, Oakland.	
†Hans von Geldern, A.B. ....	San Francisco
1724 Broadway, San Francisco.	

† In attendance first half-year only.

\*Ruth Olive Winegarden.....Pasadena  
2118 Channing way, Berkeley.

## FIRST YEAR

†Archibald Eli Amsbaugh.....Newman  
1038 Santa Clara av, Alameda.

Dexter Rankin Ball, A.B. ....Santa Ana  
2647 Durant av, Berkeley.

C. Coleman Berwick, A.B. ....Berkeley  
1935 Hearst av, Berkeley.

William Henry Bingaman .....Soledad  
455 Crescent st, Oakland.

Marmion Hugo Childress, A.B. ....Berkeley  
2415 Woolsey st, Berkeley.

Zach Benjamin Coblentz, A.B. ....Santa Maria  
2611 Durant av, Berkeley.

†Harry Carson Coe .....Selma  
2446 Washington st, San Francisco.

Louis Antonio Cribari .....San Jose  
2632 Durant av, Berkeley.

Nelson Caryl Davis .....Ceres  
2203 Chapel st, Berkeley.

Granville Sinclair Delamere, A.B. ....Berkeley  
2612 Piedmont av, Berkeley.

John Carey Dement, Jr. ....San Diego  
2625 Hearst av, Berkeley.

Hugo Frederick Dormody .....Placerville  
2330 College av, Berkeley.

Efner Dwight Farrington .....El Monte  
2427 Durant av, Berkeley.

Daniel Parsons Foster, A.B. ....Berkeley  
2521 Hearst av, Berkeley.

Waldron Ashley Gregory, A.B. ....Madison  
2250 Telegraph av, Berkeley.

Franklin Isadore Harris, A.B. ....San Francisco  
291 Carl st, San Francisco.

†Frank Kelsey Haight .....Fortuna  
2634 Bancroft way, Berkeley.

Darrell Bertrand Hawley .....Berkeley  
2428 Bancroft way, Berkeley.

Hal Rexford Hoobler, B.S. ....Berkeley  
2021 Durant av, Berkeley.

\* Absent on leave, 1916-17.

† In attendance first half-year only.

Hubbard Spencer Hoyt, A.B. ....	Pacific Grove
2112 Durant av, Berkeley.	
George Shigeki Iki, A.B. ....	Berkeley
1430 Milvia st, Berkeley.	
Demetrio Eugene Jeffry, A.B. ....	Healdsburg
2627 Ridge road, Berkeley.	
Charles Frank Keith, A.B. ....	Berkeley
2622 Dana st, Berkeley.	
John J. Kingston ....	San Francisco
320 Pierce st, San Francisco.	
Frank Yoshimiche Kitsuda, A.B. ....	Berkeley
2308 Virginia st, Berkeley.	
Kunisada Kiyasu, A.B. ....	Los Angeles
2308 Virginia st, Berkeley.	
Ewald Axel Larson, A.B. ....	Kingsbury
2407 S. Atherton st, Berkeley.	
Russell Van Arsdale Lee, A.B. ....	San Francisco
2446 Washington st, San Francisco.	
Armistead C. Leigh, Jr., A.B. ....	Los Angeles
2531 Channing way, Berkeley.	
†Charles Whitney Loraine ....	San Francisco
2528 Ridge road, Berkeley.	
Irvine McQuarrie, A.B. ....	St. George, Utah
1932 Home st, Berkeley.	
†Garrett Richard McTaggart ....	Stockton
422 Sutter st, Stockton.	
Elwood Richard Olsen ....	San Francisco
55 Devisadero st, San Francisco.	
†Gilbert Lansing Patterson ....	Stockton
435 E. Flora st, Stockton.	
Clarence Griffith Potter ....	San Francisco
836 Clayton st, San Francisco.	
†David Germain Sala ....	Stockton
2430 Bancroft Way, Berkeley.	
John Jacob Sampson ....	San Francisco
2211 Fulton st, Berkeley.	
Henry Albert Sawyer ....	Berkeley
83 Shasta st, Berkeley.	
†Hans Frank Schluter ....	Orland
2600 Durant av, Berkeley.	
Jay Randolph Sharpstein, A.B. ....	Alameda
1545 Benton st, Alameda.	
Edward Byer Shaw, A.B. ....	Berkeley
2511 Channing way, Berkeley.	

† Absent on leave, second half-year, 1916-17.

Henry Silberman .....	San Francisco
1372 McAllister st, San Francisco.	
†Milton Silver .....	Los Angeles
2533 Channing way, Berkeley.	
Morris Harold Silverberg .....	San Francisco
2519 Durant av, Berkeley.	
Henry Ignatius G. Sussdorff, A.B. ....	Berkeley
2542 Chilton way, Berkeley.	
Claude Verner Thompson, A.B. ....	Orland
2614 Dwight way, Berkeley.	
Arthur Lafayette Warren, A.B. ....	Berkeley
1610 Bonita av, Berkeley.	
*George Anderson Williams .....	Berkeley
1980 University av, Berkeley.	
Frank Willis Yocom, B.S. ....	Pasadena
2642 Bancroft way, Berkeley.	

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\* Absent on leave, 1917-18.

† Absent on leave, second half-year, 1916-17.

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### SUMMARY

#### Candidates for the Degree of Doctor of Medicine

Fourth Class .....	26
Third Class .....	24
Second Class .....	30
First Class .....	49
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Total .....	129

## GRADUATES



GRADUATES

1864

D'Amour, Ferdinand  
Davie, Jr., J. C.  
\*DuBois, A. L.  
\*Handy, J. C.  
Pond, W. B.  
\*Stivers, C. A.  
\*Weeks, F. L.  
Welch, W. P.

1865

Drinkhouse, E. J.  
Fahn, C. M.  
Gros, Edward  
Taylor, Edward R.

1866

Barber, Edward T.  
\*Brierly, Conant B.  
Fine, Andrew  
Heavitt, Granville  
Lingo, Marin B.  
\*Plummer, Richard H.  
\*Prevost, J. Renny  
Richardson, J. A.  
\*Rupe, Samuel H.

1867

Cairns, John  
\*Hackett, John  
Hansen, Thomas C.  
\*O'Neill, A. A.  
\*Robinson, Luke  
Shelton, Thomas W.  
Steely, John  
\*Widney, J. P.

1868

Bates, Charles B.  
\*Cameron, James S.  
\*Corbett, S. J.  
\*McGuire, Lucius  
\*Newmark, Valentine  
Waltz, G.

1869

Caldwell, Robert  
\*Clark, J. J.

\* Deceased.

Cochran, W. A.  
Haile, C. S.  
\*Toland, Charles A.  
\*Tuttle, H. P.  
\*Turner, J. T.  
Webber, J. C.  
\*Younger, Alex. J.

1870

Briggs, M. W.  
Mackenzie, J. H.  
Rucker, H. N.  
Sage, C. T.  
Seawell, John L.

1871

Churchill, Leonard  
\*Hampton, James E.  
\*Kirkpatrick, C. A.

1872

Keane, George B.  
Kurtz, Joseph  
\*Lyford, L. Dextor

1873

\*Anderson, J. A.  
\*Cox, Thomas H.  
\*Martineaut, E. D.  
Mays, William H.  
\*O'Neill, J. C.  
\*Schnabel, Martin  
\*Whittell, A. P.

1874

Biggs, Frederick P.  
\*Blake, James W.  
\*Delmont, Francois  
\*Hicks, Young E.  
\*McDermott, William P.  
McLean, Robert A.  
Miller, Charles F.  
Nottage, George E.  
\*Waters, John W.

1875

Agnew, William P.  
Allen, Edward O.



\*Benedict, C. W.  
 Calbreath, John F.  
 Callaghan, D. T.  
 Davidson, Joseph R.  
 \*Dawson, Alson  
 Harris, Thomas W.  
 Kosbue, A. Emil  
 Mason, Benjamin F.  
 Miller, John A.  
 Scheelhaus, E. J.  
 \*Simon, Jules A.  
 Smith, William P.  
 Swann, Charles M.

## 1876

\*Blake, Charles M.  
 \*Braman, J. J.  
 Brown, George J.  
 \*Chaigneau, V. A.  
 \*Connolly, John J.  
 \*Hodgdon, W. H. A.  
 \*Hook, Walter E.  
 Kirkwood, J. W.  
 \*Lindenberger, W. H.  
 McCormack, H. F.  
 Minor, John F.  
 Pope, Horace E.  
 Powell, J. M.  
 \*Quinlin, Albert P.  
 Rorke, James  
 Seawell, Thomas W.  
 Sichel, Gust. W.  
 Smith, T. H.  
 \*Summers, G. M.  
 Wanzer, L. M. F.

## 1877

\*Duncan, S. C.  
 \*Frost, James  
 \*Heinimann, J. M.  
 Joshephi, Simon E.  
 McColl, G. F.  
 McDonald, J. J.  
 \*Pescia, Joseph  
 \*Reich, George A.  
 \*Reynolds, George E.  
 Stephenson, B. E.  
 Swisher, J. R.  
 Von Buelow, F.  
 Weiss, E. M.  
 Wheaton, S. P.  
 Williamson, W. T.

\* Deceased.

## 1878

Bradbury, George F.  
 Bruns, William C.  
 Curran, Mary K.  
 \*Guillemard, A. J.  
 \*Lewitt, Frank A.  
 \*McLaughlin, M. A.  
 Osler, Charles  
 \*Pruett, J. A.  
 Seavey, L. T.  
 Shuey, Sarah I.  
 Summers, John F.

## 1879

Addington, D. M.  
 \*Downs, George W.  
 \*Foote, Gilbert  
 \*Gale, Herbert A.  
 Harmon, Roberdeau  
 \*Howell, H. H.  
 \*Hughes, Lewis J.  
 Johnstone, Arthur.  
 Scott, Arthur W.  
 Smith, George S.  
 Sparks, Agnes  
 Voight, W. C.  
 Younger, Edward A.

## 1880

\*Bettelheim, A. F.  
 \*Caldwell, H. H.  
 \*Foulkes, J. F.  
 Hopkins, T. P.  
 Laidlaw, Horace  
 Lord, Franklin F.  
 \*Meyers, Robert C.  
 Mueller, H. E.  
 Pond, Henry M.  
 Robertson, John W.  
 Sobey, L. A.

## 1881

Bates, Walter E.  
 Beardsley, E. M.  
 Clinton, Charles A.  
 \*Dean, Andrew J.  
 DePuy, Anson A.  
 Evans, C. W.  
 \*LeFevre, J. P.  
 Gillham, G. W.  
 \*Grattan, E. L.  
 Merritt, Emma L. Sutro

Morgan, F. E.  
Olds, William H.  
Sawyer, H. C.  
\*Sellon, Anna F.  
Sheets, John H.  
\*Young, Junius D.

1882

Beaumeister, Benjamin H.  
Bromly, R. Innis  
\*Buchard, L. S.  
Matthewson, J. M.  
Merritt, George Washington  
\*Moody, Mary W. F.  
\*Muenter, Henry  
Patterson, T. J.  
Payne, Joseph Richey  
Pressley, John B.  
Reardon, Thomas B.  
\*Senter, E. S.  
\*Stanton, James  
\*Stewart, J. M.  
Tarter, Albert P.

1883

\*Bordé, Henry J.  
\*Hughes, Jerome A.  
Lonigo, Emile V.  
Lovett, William B.  
\*Lundborg, Gustaf W.  
Mervy, Emile C.  
Patton, Charles J.  
Reed, Clarence E.  
\*Riley, Jahial S.  
Urban, Kurt  
\*Wickman, William J.

1884

\*Anderson, Winslow  
\*Beede, William M. S.  
Buckley, Vincent P.  
Clark, William D.  
Connolly, Thomas E.  
D'Ancona, Arnold A.  
Day, John G.  
Dodge, Henry Washington  
\*Enright, Chas. M.  
Gates, Frank H.  
\*McCoy, Juan W.  
Nuttall, George H. F.  
Partsch, Herman  
Scholl, Albert L.  
\*Sherman, Elenora S.

\* Deceased.

1885

Armistead, Howell V.  
Baldwin, Robert O.  
\*Collins, Addison C.  
Gallwey, John  
Howard, Katherine I.  
Lustig, Daniel D.  
Nichols, Theodore A.  
\*Perrault, Edward L.  
\*Wilcox, Wilbur J.  
Williamson, John M.  
\*Winton, Henry M.  
Woods, W. E. Josephine  
\*Wooster, David

1886

Brown, Ernest L.  
\*Chalmers, William P.  
Conlan, William E.  
Kingsley, Thomas H.  
\*Plant, Benjamin A.  
Soboslay, Julius  
Wilson, Kemlo R. McD.

1887

Cluness, Wm. R., Jr.  
Cook, Frank S.  
Fottrell, Michael J.  
Glaze, George I.  
Howard, William B.  
Kirchhoffer, Frederick  
Koboyashi, Sankio  
Mays, Arthur H.  
\*McLean, John T.  
Morrill, Augustus L.  
\*Park, Theorilda C.  
\*Reardon, William E.  
Shannon, James  
Tevis, Henry L.  
Watanabe, Tey  
Williams, Robert B.

1888

Alexander, Monrove E.  
Barbat, John H.  
Cox, Rosamond L.  
\*Dennis, Nathan P.  
\*Dunn, James P. H.  
\*Estes, Melvin B.  
Frick, Euclid B.  
Happersberger, Albert K.  
Kelly, John L.  
Noble, John A.  
White, James T.

1889

- \*Bunker, Robert E.
- \*Foreman, Francesca I.  
Gleaves, Christopher C.
- Greene, Frances R. Marx
- Haskin, William H.
- Holmes, Edward R.
- Jones, Ottowell W.
- Kawakami, Nasayasu
- Mather, Squire R.
- Mayer, Oscar J.
- O'Brien, Aloysius P.
- Oliver, Joseph A.
- Tuggle, Samuel P.
- Wade, Mark S.
- \*Zeyn, Gustav C.

1890

- Bond, Frederick T.
- \*Felt, Rae
- Hawkins, William J.
- Hunkin, Samuel J.
- \*Kugeler, Henry B. A.  
Mann, Chas. S.
- \*Martinez, John M.
- Meyer, Albert G.
- Mohun, Charles C.
- Montgomery, Charlotte B. S.
- Scholl, Albert J.
- Surryhne, Benjamin F.
- Thrasher, Marion

1891

- Baker, Henry Anthony
- Blake, Charles Robert
- Burnham, Clark James
- Collischonn, Philip
- Driscoll, Edward Paul
- Dunbar, Arthur White
- Ford, Campbell
- \*Kirby, William Thomas
- Lagan, Edward
- Macdonald, John Munroe
- McMurdo, John R.
- \*Milton, Joseph Leo
- Molony, James John
- Morse, Fred Wellington
- Olsen, Marie Colditz
- \*Oviedo, Louis Perfecto
- Petrie, Frank Branson
- \*Sims, John Marion
- Smith, Weston Olin
- Warner, James Kyle
- Wayson, James Thomas

\* Deceased.

1892

- Caglieri, Guido E.
- Crook, Emma E.
- D'Ancona, Lillie Busenius Schram
- \*Fraser, S. J.
- Johnstone, Ernest Kinlock
- Lowe, Frederick William
- \*McCone, James F.
- Nelson, John A.
- Ogden, George W.
- Rathbone, William T.
- Sanborn, Franklin H.
- Sutherland, Robert L.
- Terry, Wallace Irving
- Von Adelung, Edward, Jr.

1893

- Aird, John W.
- Berndt, Richard M. H.
- Cadwallader, Rawlins
- Conrad, David Andrew
- Cothran, Abraham L.
- Falek, Millicent E.
- Fleming, Bartholomew Francis
- Flesher, Frederick Charles G.
- Freeman, Ernest Maynard
- Gall, Alexander Marshall
- Glover, Cosmos Andrew
- Horton, Edward Shelton
- Hulse, Clarence H.
- \*Lagan, Hugh
- Maguire, Charles S.
- McCarthy, Charles D.
- Phelan, Henry duR.
- \*Pond, Gardner Perry
- Rantz, Stephen H.
- Sanborn, William K.
- Schrader, Sydney H.
- Simon, Grace

1894

- Booth, John R.
- Bunnell, Edwin
- Clark, George Waverly
- Cleary, Stephen
- Crees, Robert
- De Puy, Edward Spence
- Dickerson, Clarence Fitzhugh
- Fitzgibbon, Frank Timothy
- Freeman, Charles Henry
- Greth, August
- Hill, Edward John
- Holmes, Thomas Blakeman

Leland, Thomas B. W.  
 MacInnis, Martin B.  
 McCullough, Frank E.  
 McKnight, Helen M.  
 Morrissey, Joseph Grant  
 Morrison, Mary E.  
 Pawlicki, Casimir F.  
 \*Reith, Fenelon M.  
 Root, Corydon B.  
 Ryfkogel, Henry A. L.  
 Selling, Natalie  
 Sharp, James Graham  
 \*Sime, Neli A.  
 Smith, Harvey F.  
 Stirewalt, Henry W.  
 Thompson, James Goodwin  
 Tiffany, Edward V.  
 Wilkes, Farrington  
 Wright, Henry E.

1895

Bacigalupi, Louis D.  
 Badilla, Jose Crisanto  
 \*Barbat, William Benjamin Frank-  
 lin  
 Boyes, William J. R.  
 Browne, Augustus Frank  
 Dudley, Frank W.  
 Easton, Daniel E. F.  
 \*Emerson, Horatio B.  
 \*Flood, John J.  
 \*Gray, Robert F.  
 \*Hay, William G.  
 \*Heller, Clarence Louis  
 Helms, George L.  
 Hopkins, Edward Kimball  
 Hull, James P.  
 Hyde, George E.  
 Lartigau, August L. J.  
 \*Lutz, Frederick A.  
 MacCallum, Hammond J.  
 \*McCulloch, Thomas A.  
 Nast, John Ernest  
 Phillips, Adelina M. Feder  
 Rinne, Frederick A.  
 Sankey, Mary J.  
 Schmelz, Charles J.  
 Sharp, Rose Eppinger  
 Stone, Bertram  
 \*Trafton, William Augustus  
 Villain, Albert J.

\* Deceased.

1896

Allen, Clifford Emmet  
 Anderson, Helen O.  
 \*Armistead, Cecil M.  
 Bancroft, Eleanor May Stow  
 Beck, Henry Martin  
 Blum, Sanford  
 Botsford, Mary Elizabeth  
 Broughton, George Anthony  
 Burnham, William P.  
 Cameron, Howard McD.  
 Chace, William D'Arcy  
 \*Coe, Leonard Hayes  
 Cox, Thomas F.  
 Giannini, Attilio H.  
 Harrigan, Joseph T.  
 Katsuki, Ichitaro  
 Kellogg, Wilfred Harvey  
 \*Kearney, James Frederick  
 \*Lee, Arthur S.  
 Maloon, Clarence LaFayette  
 McGettigan, Charles D.  
 \*McLaughlin, Alfred  
 Maher, Thomas D.  
 Morgan, Charles L.  
 Morrow, Howard  
 Murphy, James Daniel  
 Muscot, Brayton  
 Newman, Alfred  
 Noble, Mary L.  
 O'Brien, John Henry  
 O'Brien, John Thomas  
 Oldenbourg, Louise Augusta  
 \*O'Malley, William Henry J.  
 Orr, Robert H.  
 \*Painter, George Louis  
 \*Parkman, Wallace Ernest  
 Putnam, Victor E.  
 \*Rochex, Joseph  
 Ryer, Marshall B.  
 Scott, Florence  
 \*Stafford, John T.  
 Stern, Arthur A.  
 Stewart, Mary J.  
 Stone, Mack V.  
 Stover, William M.  
 Thompson, Grace Feder  
 Thorpe, Lewis Sanborn  
 \*Trask, Henry Caustin  
 Trevino, Alberto  
 Waller, Newton B.

1897

Borchers, Bertha  
Curl, Holton C.  
Dunn, William Lawrence  
Hickey, Thomas A.  
\*Huntington, Samuel D.  
\*McMahon, Frank A.  
\*McLean, Murdoch

1898

Abraham, Henry  
Bartlett, Cosan Julian  
Bell, William Lisle  
Boalt, Grace S. Linforth  
Bruguiera, Pedar Sather  
Callaway, Edwin  
Crowley, Thomas J.  
Dufficy, George Woodward  
Fine, Henry M.  
Giroux, Edward David  
Hill, Howard Stephen  
Judell, Malvina I.  
Keenan, Alexander Stanislaus  
Lucchetti, Victor F.  
Menefee, Joseph S.  
Muller, Frederick C.  
Roche, Thomas B.  
Tillman, Frank J.  
Tobiner, Oscar D.  
Trew, Neil C.

1899

Arthur, Samuel Richard  
Ash, Rachel Leona  
Clark, Thomas James  
Colliver, John Adams  
Dinkelspiel, Edgar Meyer  
Ebright, George Elliot  
Emerson, Mark Lewis  
Franklin, Milton Washington  
Frick, Donald Jackson  
Gardner, Samuel James  
Gillihan, Allen Francis  
Graham, Harrington Bidwell  
Henesey, Walter Joseph  
Lanz, Paul Ruhnke  
Legge, Robert Thomas  
\*Millar, Charles Forester  
McElroy, Bernard Francis  
Onesti, Silvio Joseph  
Pope, Emma Wightman  
Pope, Saxton Temple

\* Deceased.

Rice, Edward James  
Stevens, William Emerson  
Stevenson, George Lawrence  
Taylor, James Edward  
\*Taylor, Oscar Nettleton  
Volkhardt, Vida Redington  
Weyer, Gustavus Adolphus  
Willard, William Patten

1900

Alderson, Harry Everett  
Bacigalupi, David Eugene  
Dorn, Dora Ida  
Doychert, Ernestine  
Farrow, Edgar James  
Fernandez, Manuel  
Fischer, Elizabeth F. J.  
Harvey, William P.  
Irones, Rutherford Buchard  
Klotz, Bernard John  
Langdon, Samuel Walter Ross  
Larson, Julia Paulina  
Laughlin, Clyde Briggs  
Maguire, Thomas Michael  
McChesney, George Jewett  
McIntosh, Arthur Merrill  
\*Miyabe, Tadataro  
Moore, William George  
Nolan, Mary Elizabeth  
Osprig, Peter  
Pratt, Matthew Dennis  
\*Reinhardt, George Frederick  
\*Russ, Raymond John  
Saph, Louis Victor  
Simpson, Frank William  
Sullivan, John Francis  
Sweeney, George Joseph  
\*Vassault, Theodora Elliott  
Watts, Herbert Charles  
Wemple, Emmet LeRoy, Jr.  
Wildier, Edwin Milton

1901

Arthur, Edgar Allen  
Beerman, Wilfred Fenton  
Dickie, Walter Murray  
Dresser, Ralph Orlando  
Force, John Nivison  
Hill, Florence McCoy  
Hill, Harold Phillips  
Hill, Reuben Chandler  
Kavanaugh, Mary Frances

Lennon, Milton Byrne  
 Leonard, John Vaughan  
 Lindsay, William Kinkade  
 Madsen, Rasmus Hansen  
 Lartigau, Kate Isabel Brady  
 Morong, Frederick Lincoln  
 \*Murphy, William James  
 Purlenky, George Philip  
 Sanborn, Fletcher Greene  
 Schmitt, Lionel Samuel  
 Seawell, James Walter  
 Simmons, Haydn Mozart  
 Smythe, Hudson  
 Sweetser, George William  
 Thomas, Benjamin  
 Toner, Joseph Michael  
 \*White, John Lysander  
 Woolsey, Chester Howard  
 Yanagisawa, Una Yone

1902

Bakewell, Benjamin  
 Baumgarten, William  
 Bill, Philip August  
 Buckley, Emma  
 Chilson, William Charles  
 Culver, Blanche C. Van Heusen  
 Deininger Marguerite  
 \*Fanning, Henry David  
 Foster, Ernest Charles  
 Gleason, Charles Raymond D.  
 Henderson, Frank Revere  
 Juilly, George Hippolyte  
 Kucich, Ostroilo Stanislaus  
 Lee, Adelbert Watts  
 Leimbach, John Herbert  
 Lendrum, Birney Alexander  
 Lensman, Arthur Pascal  
 Majors, Ergo Alexander  
 Mallery, John Harry  
 McGinty, Arthur Thomas  
 Meagher, Joseph Frederick  
 Merwin, Caroline Stow  
 Moulton, Dan Hazen  
 Newton, John Crockett  
 O'Donnell, Joseph Martin  
 Piper, Harry Elwin  
 Powers, George Herman  
 Pressley, James Fowler  
 Putnam, Frank L.  
 Quinn, Thomas D'Arcy McGee  
 Tebbe, Frederick Henry  
 Thompson, Lewis Lee

Topham, Edward  
 \*Walsh, William John  
 Williams, Walter Joseph M.  
 Zumwalt, Frederick H.

1903

Baer, Adolph  
 Biber, Paul Edward  
 Bine, René  
 Breitstein, Louis Isidor  
 Culver, George DeWitt  
 Duggan, Henrietta Hagan  
 Ellis, James Alexander  
 Girard, Frank Robert  
 Hamilton, James Kiah  
 Hill, Howard Gilman  
 Hurley, James Raymond  
 Johns, Madeline  
 Kavanagh, Joseph James  
 Lissner, Henry H.  
 Longabaugh, Rudolph Ignatius  
 McGuire, William Garrett  
 McKinnon, Aloysius John  
 McKown, Charles Lemon  
 McNab, Thomas Reid  
 Miner, Mark Leonard  
 Olcovich, Viola Ruth  
 Reynolds, Robert G.  
 Roberts, Harry Philip  
 Rosenberg, Caroline  
 Rutherford, Walter Scott  
 Stone, Earle Almerston  
 Stafford, David Emmet  
 West, Sydney Vattel  
 Wills, Clarence Alfred  
 Winslow, Josephine E. Barbat

1904

Baker, Morgan Dillon, Jr.  
 \*Baum, Maurice Lowell  
 Baumeister, Edward Emery  
 Brown, David William  
 Brownsill, Edith Sara  
 Castlehun, Paul  
 Chain, John Nolan  
 Ewing, David Albert  
 Foshay, Arthur Wellesley  
 \*Harker, George Asa  
 Hart, Morton Edwin  
 Hector, Louise A. Linscott  
 Hector, Robert, Jr.  
 Hoag, Foster Melancton  
 Jacobs, Louis Clive  
 Kofoid, Henning

\* Deceased.

McClish, Clarke Loring  
 Mix, Pernier Albert  
 Nicholls, Robert Julian  
 Peoples, Stuart Zeno  
 Sandholdt, John Peter  
 Schwarz, Jacob  
 Slavich, John Francis  
 Smith, Eugene Kneeland  
 Van Tassell, Fred Hugh  
 Waldeyer, Wilhelm  
 Warren, Henry Claud  
 Webster, Hannah Ellen

## 1905

Albee, George Cummings  
 Alexander, Edgar William  
 Bigelow, Coniah Leigh  
 Blair, James Clark  
 Bricca, Constantine Raphael  
 Briggs, George Abiel  
 Cothran, William Franklin  
 Cowden, Ambrose Franklin  
 DeHaven, Mary Tom  
 Harker, Harriette Buttler  
 Hoffman, Herman Verplanck  
 Kenny, William  
 Peck, John William  
 Reeve, Oscar Charles  
 Ryan, Louis Xavier  
 Snyder, George Samuel  
 Turner, Eldridge Curtis  
 Vickerson, John Irving

## 1906

\*Adler, Alexander  
 Brasier, Olive Violet  
 dal Piaz, Antonio Menotti  
 Dannenbaum, Sydney Roy  
 Doran, Alexander Vincent  
 Eidenmuller, William Cooper, Jr.  
 Franklin, John Henry  
 Hardy, Samuel Percy  
 Hays, Wilfred Bertram  
 Hunter, George Graham  
 Igo, Louise Mary  
 Jones, Charles Breckenfield  
 Kronenberg, Herman  
 Mahan, David Joseph  
 Ochsner, Richard Leon  
 Stone, Waid James  
 Temple, Jackson

Wrenn, Joseph Thomas  
 Zumwalt, Reuben Sylvester

## 1907

Alexander, Archie Addison  
 Allen, Frederick Madison  
 Bingham, Elmer Wiley  
 Bixby, Wilfred Everett  
 Clark, John Aloysius  
 \*Craig, Lloyd Alexander  
 Dawson, William Calhoun  
 Devine, Cornelius Thomas  
 Dodds, Thomas Garfield  
 Gutzwiller, Anna Maria  
 Howell, Walter Orrin  
 Johnston, James Harvey  
 Ostrom, Earl Emmet  
 Paroni Meads, Romilda  
 Pauson, Charles Arthur  
 Peterson, Edward August  
 Proctor, Mehitabel Clara  
 Schulze, Otto Theodore  
 Sobey, Gifford Lyne  
 Stansbury, Middleton Pemberton  
 Stoddard, Thomas Albion  
 Sylvester, Florence Mabel  
 Telfer, Gavin James  
 Walcott, Allen Moore

## 1908

Beebe, Lela June  
 Briggs, LeRoy Hewitt  
 Bunnell, Alexander Sterling  
 Cartwright, Sanford Warren  
 Foster, Harry Emerson  
 Frates, Frank Edward  
 Howe, Louis Philippe  
 Jacobs, Samuel Nicholas  
 Jee, Shin Five Pond Mooar  
 Johnson, Hans Coford  
 Lewitt, Frederick Clinton  
 Mansfield, Thomas Drummond  
 Meads, Albert Manson  
 Newman, Lester  
 Powell, Alvin  
 Sutherland, Robert Thomas

## 1909

Cohn, Herbert Jacob  
 McVey, Charles Leland  
 Meyers, Wallace Longfellow

\* Deceased.

Naffziger, Howard Christian  
White, Margaret

1910

Hooker, Marion Osgood  
Irwin, Wilbur Henry  
Long, Seely Frederick, Jr.  
Moore, Chester Biven

1911

Baldwin, Walter Isaac  
Best, Eldridge John  
Bryan, Lloyd  
Campbell, William Howard  
Gompertz, Kate Rawlinson  
Markel, Howard Hill

1912

Bailey, Samuel Ellsworth  
Bush, Henry Chesley  
Cleary, Ernest Winton  
Dozier, Linwood  
Hoag, Carl Leslie  
Kelly, Frank Lewis  
Long, Herbert Everett  
Powell, Dewey Robert  
Prince, Lionel David  
Stadtmuller, Ellen Smith  
Sweet, Clifford Daniel

1913

Allen, Warren Barrett  
Aller, Daniel Irwin  
Catton, Joseph Henry  
Cornell, Earl Hamilton  
Harvey, Richard Warren  
Marks, Selby Harold  
Risdon Storer, Ruth Charlotte  
Tranter, Charles Lee

1914

Abbott, Roy Charles  
Barney, Edna Locke  
Baxter, Frank Stanley  
Berkley, Hugh Kling  
Bull, Edward Cline  
Cunningham, Ruby Lacy  
Ehlers, Henry  
Lewis, Elizabeth Grace

Pierce, George Warren  
Rowe, Albert Holmes  
Scatena, Fred Nicholas

1915

Betts, Irvin H.  
Clapp, Gordon Adams  
Epsteen, Abelson  
Friedman, Aaron  
Gelston, Clain Fanning  
Holzberg, Henry Leopold  
Kretsinger, George Arneke  
Kruse, Fred Herman  
Maxwell, Alice Freeland  
Rehfsch, John Morse  
Seaver, Homer Carlton  
Wells, Clarence Edgar  
Woolsey, John Homer

1916

Arrington, Mabel Florence  
Baillie, Elizabeth Worley  
Chamberlain, William Edward  
Charvoz, Elton Ralph  
Cook, Enos Paul  
Corey, Dunnleigh  
Craig, Mary  
Davis, Brython Parry  
Dunn, Thomas Balfour Mackie  
Goss, Orville Roscoe  
Hare, Herold Pittman  
Holliger, Charles Daniel  
Horner, Warren Douglas  
Jones, Maurice  
Linde, Frederick George  
Mathé, Charles Pierre Louis  
Morris, Laird Monterey  
Morris, Myrl  
Newell, Robert Reid  
Owen, Joseph Allen, Jr.  
Pinger, Frank William  
Pritchard, Jacob Leroy  
Ruddock, John Carroll  
Schulze, Margaret  
Searls, Henry Hunt  
Sherman, Julius  
Sherman, Robert Stanton  
Thompson, William Ben  
Williamson, Marshall Gould

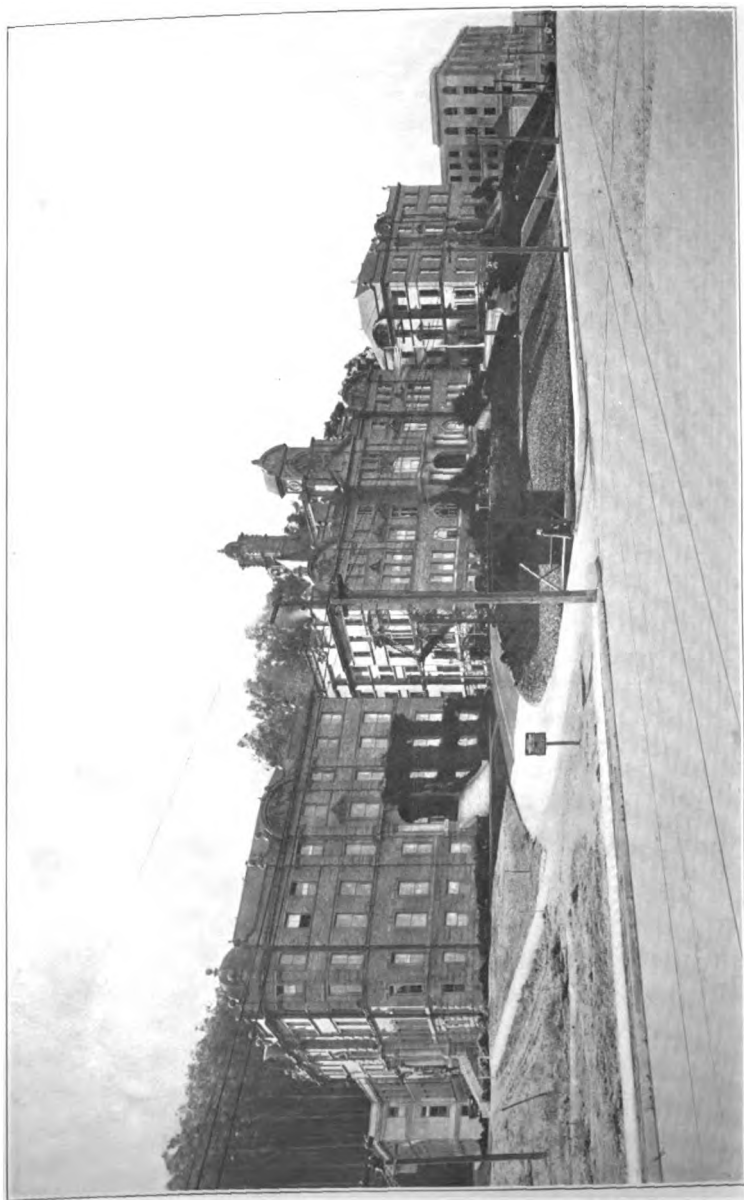


1917

Brendel, Frank Philip  
Calvi, Pini Joseph  
Cohn, Allan Largess  
Cohn, Mendel Leopold  
Cook, Orrin Simeon  
Craig, Charles Alfred  
Fay, Jewel  
Fleming, Howard Webster  
Frey, William Christensen  
Harvey, James Ernest  
Heaney, Robert Harold  
Hirschfeld, Mervyn Heller  
Hollingsworth, Merrill Windsor

McCoy, Horace Hoagland  
Mehlmann, Emma  
Miller, Hiram Edgar  
Muller, Vinton Adolf  
Penland, Hugh Elmer  
Pennington, Alma Stevens  
Schulze, Elizabeth  
Seligman, Lewis  
Shufelt, Alson Anderson  
Sooy, Daniel Warren  
Washburn, William Wallace  
Williams, John Chilton  
Zumwalt, Elmo Russell





**UNIVERSITY OF CALIFORNIA**

**MEDICAL SCHOOL**

**ANNOUNCEMENT FOR 1918-19**

**UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL  
PARNASSUS AND SECOND AVENUES  
SAN FRANCISCO**



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## CALENDAR

### 1919

January 13 (Monday)—Second half-year; class work begins.

June 4 (Wednesday)—The Fifty-sixth Commencement.

July 1—Undergraduate applications for admission to the Medical School, with credentials, should be filed at the Dean's Office. This may be done by mail.

August 7 (Thursday)—12 (Tuesday)—Entrance examinations at Berkeley for freshman standing (pre-medical) in the College of Letters and Science. Applicants will be required to obtain permits to enter the examination room. Examination permits will be issued by the Recorder of the Faculties on or before August 6 (Wednesday). But applications for permits to be sent by mail should be made as far in advance of August 6 (Wednesday) as will enable applicants to receive their permits by that date. The office of the Recorder of the Faculties is in California Hall, Berkeley.

August 11 (Monday)—Examinations begin for applicants for advanced standing and for students previously conditioned.

August 15 (Friday), 16 (Saturday), 18 (Monday), 9 a.m.—12 m.—Registration of students of all classes at Secretary's office in the main building of the Medical School in San Francisco.

August 19 (Tuesday)—Class work begins. Payment of the first installment of the tuition fee is required on or before this date.

November 27 (Thursday)—November 29 (Saturday)—Thanksgiving recess.

December 15 (Monday)—Examinations begin.

December 22 (Monday)—Christmas vacation begins.

### 1920

January 13 (Tuesday)—Second half-year; class work begins. Payment of the second installment of the tuition fee is required on or before this date.

March 23 (Tuesday)—Charter Day: a holiday.

May 12 (Wednesday)—The Fifty-seventh Commencement.





# **ORGANIZATION AND HISTORY**



# REGENTS OF THE UNIVERSITY

**NOTE.**—The regular meetings of the Regents are held at 2 p.m. on the second Tuesday of each month, except July, and on the day before Commencement, at such places as may from time to time be determined, ordinarily at the California School of Fine Arts, California and Mason streets, San Francisco. The Los Angeles office of the Regents is in Room 417, Union League Building, Los Angeles.

## REGENTS EX OFFICIO

**HIS EXCELLENCY WILLIAM DENNISON STEPHENS**  
Governor of California and President of the Regents  
Sacramento

**HON. CLEMENT CALHOUN YOUNG, B.L.**  
Lieutenant-Governor of California  
Sacramento

**HENRY W. WRIGHT**, Speaker of the Assembly  
1009 Fair Oaks ave., South Pasadena

**WILL C. WOOD**  
State Superintendent of Public Instruction  
Sacramento

**HON. GEORGE ROEDING**  
President of the State Agricultural Society  
Box 1310, Fresno

**BYRON MAUZY**  
President of the Mechanics' Institute  
807 Mechanics Institute bldg, San Francisco

**BENJ. IDE WHEELER, Ph.D., LL.D., Litt.D.**  
President of the University  
217 California Hall, Berkeley

## APPOINTED REGENTS

The term of the appointed Regents is sixteen years, and terms expire March 1 of the year indicated in parentheses. The names are arranged in the order of original accession to the board.

**Mrs. PHOEBE APPERSON HEARST (1930)**  
Pleasanton  
Business address: 410 Hearst bldg, San Francisco

**ARTHUR WILLIAM FOSTER, Esq. (1932)**  
1210 James Flood bldg, San Francisco

**GARRETT WILLIAM McENERNEY, Esq. (1920)**  
2002 Hobart bldg, San Francisco

**RUDOLPH JULIUS TAUSSIG, Esq. (1932)**  
Main and Mission sts, San Francisco

**GUY CHAFFEE EARL, A.B. (1918)**  
14 Sansome st, San Francisco

**JOHN ALEXANDER BRITTON, Esq. (1930)**  
445 Sutter st, San Francisco

**CHARLES STETSON WHEELER, B.L. (1928)**  
Nevada Bank bldg, San Francisco

**WILLIAM HENRY CROCKER, Ph.B. (1924)**  
Crocker National Bank, San Francisco

**PHILIP ERNEST BOWLES, Ph.B. (1922)**  
American National Bank, San Francisco

**JAMES KENNEDY MOFFITT, B.S. (1924)**  
First National Bank, San Francisco

**CHARLES ADOLPH RAMM, B.S., M.A., S.T.B. (1928)**  
1100 Franklin st, San Francisco

**EDWARD AUGUSTUS DICKSON, B.L. (1926)**  
1631 Cimarron st, Los Angeles

**JAMES MILLS, Esq. (1926)**  
Hamilton City

**CHESTER HARVEY ROWELL, Ph.B. (1920)**  
Fresno

## OFFICERS OF THE REGENTS

His Excellency Wm. Dennison Stephens

President  
Sacramento

Ralph Palmer Merritt, B.S.

Comptroller, Secretary, and Land Agent  
220 California Hall, Berkeley

R. G. Sproul, B.S.

Assistant Comptroller, Assistant Secretary,  
and Assistant Land Agent.  
220 California Hall, Berkeley

Mortimer Fleishacker, Esq.

Treasurer

Anglo-California Trust Company, San Francisco

James M. Rannon, Jr., A.B., LL.B.

Attorney

1107 Merchants Exchange bldg, San Francisco

## STANDING COMMITTEES OF THE BOARD OF REGENTS FOR THE YEAR 1916-17\*

*Agriculture:*

Regents Foster, Dickson, Mills, and Roeding

*Curriculum and Degrees:*

Regents Rowell, Moffitt, and Bowles.

*Finance:*

Regents Earl, Foster, Britton, Moffitt, and Taussig.

*Grounds and Buildings:*

Regents Britton, Mrs. Hearst, Bowles, and C. S. Wheeler.

*Lick Observatory:*

Regents Ramm, McEnerney, Young, and Crocker

*Medical Instruction:*

Regents Crocker, Moffitt, Ramm, Dickson, and Taussig

*Scripps Institution for Biological Research:*

Regent Dickson

*University Hospital:*

Regents Crocker, Taussig, Britton, Earl, and Moffitt

*Wilmerding School:*

Regents Taussig, Earl, and Moffitt

*Executive Committee:*

This committee consists of the chairmen of all standing committees

THE GEORGE WILLIAMS HOOPER FOUNDATION FOR  
MEDICAL RESEARCH

## ADVISORY BOARD

BENJAMIN IDE WHEELER, President of the University.

E. D. CONNOLLY, San Francisco.

A. W. FOSTER, Regent of the University.

HERBERT C. MOFFITT, Dean of the Medical School.

HENRY S. PRITCHETT, President of the Carnegie Foundation.

WILLIAM H. WELCH, Professor of Pathology, Johns Hopkins Medical School.

GEORGE H. WHIPPLE, Director of the Research Laboratory.

\* The President of the Board of Regents and the President of the University are *ex officio* members of all committees of the Board. In each committee the name of the chairman is first and the name of the vice-chairman is second.

## FACULTY AND TEACHING STAFF\*

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### PRESIDENT OF THE UNIVERSITY

BENJAMIN IDE WHEELER, Ph.D., LL.D., Litt.D., L.H.D.,  
California Hall, Berkeley.

### EMERITUS PROFESSORS

THOMAS W. HUNTINGTON, A.B., M.D., *Emeritus Professor of Clinical Surgery*,  
516 Sutter street, San Francisco.

WILLIAM B. LEWITT, M.D., *Emeritus Professor of Pediatrics*,  
210 Post street, San Francisco.

### PROFESSORS

HERBERT C. MOFFITT, B.S., M.D., *Professor of Medicine*,  
240 Stockton street, San Francisco.

†FREDERICK P. GAY, A.B., M.D., *Professor of Pathology*,  
Department of Pathology, University of California, Berkeley.

WALLACE I. TERRY, B.S., M.D., *Professor of Surgery*,  
240 Stockton street, San Francisco.

WILLIAM PALMER LUCAS, A.B., M.D., *Professor of Pediatrics*,  
University Hospital, San Francisco.

GEORGE HOYT WHIPPLE, A.B., M.D., *Professor of Research Medicine*,  
University Hospital, San Francisco.

HERBERT MCLEAN EVANS, A.B., M.D., *Professor of Anatomy*,  
Department of Anatomy, University of California, Berkeley.

FRANK WORTHINGTON LYNCH, A.B., M.D., *Professor of Obstetrics and Gynecology*,  
University Hospital, San Francisco.

WALTER R. BLOOR, Ph.D., *Professor of Biochemistry*,  
Department of Biochemistry, University of California, Berkeley.

---

\* Voting members are those above the rank of instructor.

† In United States Service.

## CLINICAL PROFESSORS

- HOWARD MORROW, M.D., *Clinical Professor of Dermatology*,  
135 Stockton street, San Francisco.
- WILLIAM BOERICKE, M.D., *Clinical Professor of Homeopathic Materia Medica*,  
391 Sutter street, San Francisco.
- †WILBUR A. SAWYER, A.B., M.D., *Clinical Professor of Preventive Medicine and Hygiene*,  
California State Board of Health, Sacramento.
- SUMNER ANSON HILL, M.D., *Clinical Professor of Applied Homeopathic Therapeutics*,  
3408 Geary street, San Francisco.

## ASSOCIATE PROFESSORS

- SAMUEL STEEN MAXWELL, Ph.D., *Associate Professor of Physiology*,  
Department of Physiology, University of California, Berkeley.
- \*ROBERT ORTON MOODY, B.S., M.D., *Associate Professor of Anatomy*,  
Department of Anatomy, University of California, Berkeley.
- ERNEST L. WALKER, B.A.S., S.B., S.D., *Associate Professor of Tropical Medicine*,  
University Hospital, San Francisco.
- KARL FREDERICK MEYER, A.B., D.V.M., *Associate Professor of Tropical Medicine*,  
University Hospital, San Francisco.
- GLANVILLE Y. RUSK, A.B., M.D., *Associate Professor of Pathology*,  
Department of Pathology, University of California, Berkeley.
- IVAN C. HALL, M.S., *Associate Professor of Bacteriology*,  
Department of Pathology, University of California, Berkeley.

## ASSISTANT PROFESSORS

- THEODORE C. BURNETT, M.D., *Assistant Professor of Physiology*,  
Department of Physiology, University of California, Berkeley.
- GEORGE W. CORNER, A.B., M.D., *Assistant Professor of Anatomy*,  
Department of Anatomy, University of California, Berkeley.
- †CHARLES W. HOOPER, A.B., M.D., *Assistant Professor of Research Medicine*,  
University Hospital, San Francisco.
- PHILIP E. SMITH, Ph.D., *Assistant Professor of Anatomy*,  
Department of Anatomy, University of California, Berkeley.
- CARL L. A. SCHMIDT, B.S., M.S., Ph.D., *Assistant Professor of Biochemistry*,  
University of California, Berkeley,

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\* Absent on leave, 1918-19.

† Absent on war leave.

ASSISTANT CLINICAL PROFESSORS

- GEORGE HERBERT EVANS, M.D., *Assistant Clinical Professor of Medicine*,  
233 Post street, San Francisco.
- HAROLD BRUNN, M.D., *Assistant Clinical Professor of Surgery*,  
135 Stockton street, San Francisco.
- HERBERT W. ALLEN, B.S., M.D., *Assistant Clinical Professor of Medicine*,  
240 Stockton street, San Francisco.
- ALBERT J. HOUSTON, B.L., M.D., *Assistant Clinical Professor of Laryngology,  
Otology and Rhinology*, 350 Post street, San Francisco.
- GEORGE E. EBRIGHT, M.D., *Assistant Clinical Professor of Medicine*,  
209 Post street, San Francisco.
- WALTER SCOTT FRANKLIN, M.D., *Assistant Clinical Professor of Ophthalmology*,  
135 Stockton street, San Francisco.
- †EUGENE S. KILGORE, B.S., M.D., *Assistant Clinical Professor of Medicine*,  
University Hospital, San Francisco.
- SAXTON T. POPE, M.D., *Assistant Clinical Professor of Surgery*,  
135 Stockton street, San Francisco.
- R. KNIGHT SMITH, M.D., *Assistant Clinical Professor of Obstetrics*,  
391 Sutter street, San Francisco.
- †LIONEL S. SCHMITT, B.S., M.D., *Assistant Clinical Professor of Syphilology*,  
135 Stockton street, San Francisco.
- MILTON B. LENNON, A.B., M.D., *Assistant Clinical Professor of Neurology*,  
135 Stockton street, San Francisco.
- †JAMES L. WHITNEY, A.B., M.D., *Assistant Clinical Professor of Medicine*,  
University Hospital, San Francisco.
- †HOWARD E. RUGGLES, A.B., M.D., *Assistant Clinical Professor of Roentgenology*,  
233 Post street, San Francisco.
- †ALANSON WEEKS, M.D., *Assistant Clinical Professor of Surgery*,  
350 Post street, San Francisco.
- E. CHARLES FLEISCHNER, M.D., *Assistant Clinical Professor of Pediatrics*,  
350 Post street, San Francisco.
- WILFRED H. KELLOGG, Ph.G., M.D., *Assistant Clinical Professor of Preventive  
Medicine and Hygiene*, 970 Chestnut street, San Francisco.
- EMMA K. WILLITS, M.D., *Assistant Clinical Professor of Surgery*,  
240 Stockton street, San Francisco.
- SAMUEL H. HURWITZ, A.M., M.D., *Assistant Clinical Professor of Medicine*,  
University Hospital, San Francisco.
- RACHEL L. ASH, B.S., M.D., *Assistant Clinical Professor of Pediatrics*,  
Children's Hospital, San Francisco

† Absent on war leave.



## LECTURERS

- †ROBERT L. RICHARDS, A.B., M.D., *Lecturer in Psychiatry*,  
Talmage, California.
- V. H. PODSTAT, M.D., *Lecturer in Psychiatry*, Livermore, California.
- JOHN N. FORCE, Gr.P.H., M.S., M.D., *Lecturer in Preventive Medicine and Hygiene*,  
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- WILLIAM C. HASSLER, Ph.G., M.D., *Lecturer in Preventive Medicine and Hygiene*,  
1085 Mission street, San Francisco.
- CHESTER G. GILLESPIE, C.E., *Lecturer in Preventive Medicine and Hygiene*,  
Bureau of Sanitary Engineering, California State Board of Health, Berkeley.
- ROBERT L. PORTER, B.S., M.D., *Lecturer in Pediatrics*,  
240 Stockton street, San Francisco.
- F. L. KELLEY, B.S., M.D., *Lecturer in Preventive Medicine and Hygiene*,  
Department of Hygiene, University of California, Berkeley.
- WILLIAM E. MUSGRAVE, M.D., *Lecturer in Tropical Medicine*,  
University Hospital, San Francisco.

## INSTRUCTORS

- WILLIAM G. MOORE, M.D., *Instructor in Obstetrics and Gynecology*,  
177 Post street, San Francisco.
- WILLIAM P. WILLARD, M.D., *Instructor in Urology*,  
177 Post street, San Francisco.
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516 Sutter street, San Francisco.
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† Absent on war leave.

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240 Stockton street, San Francisco.
- †HOWARD C. NAFFZIGER, M.S., M.D., *Instructor in Surgery*,  
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- †HERBERT S. THOMSON, B.S., M.D., *Instructor in Surgery*,  
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University Hospital, San Francisco.
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516 Sutter street, San Francisco.
- RICHARD WARREN HARVEY, M.S., M.D., *Instructor in Neurology*,  
University Hospital, San Francisco.
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516 Sutter street, San Francisco.
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<sup>1</sup> In residence first half-year only.

† Absent on war leave.

## Organization

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MIRIAM E. SIMPSON, A.B., M.A., *Assistant in Anatomy*,  
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MONTAGUE A. WOOLF, M.A., B.S.C., M.D., *Assistant in Surgery*,  
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ELSIE BLANCHARD, A.B., M.D., *Assistant in Orthopedic Surgery*,  
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MARY E. L. HALL, A.B., M.A., *Assistant in Biochemistry*,  
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### ADMINISTRATIVE OFFICERS

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W. I. TERRY, M.D. ....	Surgeon-in-Chief
†W. P. LUCAS, M.D. ....	Pediatrician-in-Chief
†F. P. GAY, M.D. ....	Pathologist
H. MORROW, M.D. ....	Dermatologist
W. S. FRANKLIN, M.D. ....	Ophthalmologist
A. J. HOUSTON, M.D. ....	Laryngologist

† Absent on war leave.

†L. S. SCHMITT, M.D. ....	Serologist
M. B. LENNON, M.D. ....	Neurologist
F. HINMAN, M.D. ....	Urologist
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†E. S. KILGORE, M.D. ....	Assistant Physician
†J. L. WHITNEY, M.D. ....	Assistant Physician
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†W. I. BALDWIN, M.D. ....	Assistant Surgeon
†H. E. RUGGLES, M.D. ....	Roentgenologist
S. H. HURWITZ ....	Director of Laboratories
M. E. BOTSFORD, M.D. ....	Anesthetist
M. KAVANAUGH, M.D. ....	Anesthetist
H. DUGGAN, M.D. ....	Anesthetist
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V. B. APPLETON, M.D. ....	Assistant Pediatrician
HUGH K. BERKLEY, M.D. ....	Assistant Pediatrician
J. V. COOKE, M.D. ....	Assistant Pathologist

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MARGARET SCHULZE, M.D. ....	Resident in Woman's Clinic
ADOLPH G. SCHNACK, M.D. ....	Resident Pediatrician
ELIZABETH SCHULZE, M.D. ....	Assistant Resident Physician
MARGARET SCHULZE, M.D. ....	Assistant Resident in Woman's Clinic
— — — M.D. ....	Assistant Resident Pediatrician

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M. R. HILL,	

\* Died, 1918.

† Absent on war leave.



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**OPHTHALMOLOGY**

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E. F. GLASEE, M.D.	C. IDE, M.D.
MARGARET CLIFF, Technician.	

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†F. C. LEWITT, M.D.	†HENRY HORN, M.D.
A. W. JOHNSON, M.D.	

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W. P. WILLARD, M.D.	J. M. McDONALD, M.D.
L. P. PLAYER, M.D.	J. C. HOLLIS, M.D.
H. PARTRIDGE, M.D.	

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†H. E. RUGGLES, M.D., Chief of Clinic.	L. BRYANT, M.D.
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VERA GARRATT, Technician.	

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ALICE F. MAXWELL, M.D., Chief of Clinic.	MARGARET SCHULZE, M.D.
--	------------------------

**TUBERCULOSIS CLINIC**

G. H. EVANS, M.D., Chief of Clinic.	L. S. MACE, M.D.
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## HISTORY AND DEVELOPMENT OF THE SCHOOL

In 1862 Dr. H. H. Toland erected a building to serve as the nucleus of a medical school. This was subsequently known as Toland Hall, and in 1872 was formally transferred to the Regents of the University of California as a department of the University. For many years the affiliation was merely nominal and the medical faculty was in entire control of the policy of the school, the support of the institution being derived from fees of the students.

In 1895 the course of instruction was extended from three to four years. In 1898 the school was moved to its present location on Parnassus Heights, a tract of land of thirteen and one-half acres donated to the University by the late Adolph Sutro. Funds were provided by the Legislature to erect buildings for law, medicine, dentistry and pharmacy, and at a later date the law building was transferred by the Board of Regents to the Medical School.

In 1902 the Board of Regents adopted a resolution of vital importance to the Medical School. Instead of preserving the former loose affiliation it was determined to regard the medical department as an integral part of the University. The properties of the school were transferred to the University, the students' fees were turned into the general University fund and support of the school was assumed by the Regents. The first two years of medicine were at once put upon an academic basis and suitable laboratories equipped.

With the destruction of the Out-Patient Department by the earthquake and fire of 1906 it became necessary to transfer the work of the first two years to Berkeley and to transform the main building of the school into a hospital and out-patient clinic. In December, 1911, the Regents of the University announced their intention of bringing together the various departments of the school, of providing a proper modern teaching hospital and of placing the clinical years upon an academic basis. Therefore, on April 9, 1912, it was resolved to consolidate all departments of the school in San Francisco as soon as feasible. A recommendation of the President of the University was adopted which provided a plan of reorganization for the clinical years.

Clinical instruction is now divided into four main departments—Medicine, Surgery, Diseases of Women, and Pediatrics. The departments of Obstetrics and Gynecology and Pediatrics are in charge of full-time teachers, and as soon as possible the departments of Medicine and Surgery will be placed upon the same basis.

In 1914 a Department of Tuberculosis and a Department of Psychiatry were established and work in these departments included in the curriculum.

In 1915 arrangements were perfected by which an agreement with the Hospital for Children and Training School for Nurses was brought about and in the same year the Regents of the University agreed to take over the Hahnemann Medical College of the Pacific and to include electives in Homeopathy in the curriculum of the Medical School.

In 1916 Biochemistry was separated from Physiology and a department of Biochemistry and Pharmacology established. A department of Preventive Medicine and Hygiene has also been started.

During the same year the Regents adopted a plan for the future development of the school. This plan contemplates the building of a nurses' home (now under construction) in connection with the new University Hospital, new buildings to house the departments of Anatomy and Pathology, Physiology and Biochemistry, the erection of an out-patient building, and the adaptation of existing buildings for purposes of administration, students' quarters, laboratories and library space.

#### THE GEORGE WILLIAMS HOOPER FOUNDATION FOR MEDICAL RESEARCH

In memory of her husband, George Williams Hooper, a pioneer citizen of San Francisco, Mrs. Hooper, on Commencement Day, May 14, 1913, transferred to the Regents of the University certain valuable property to serve as a foundation for an institute of medical research. The income at present provided is \$50,000 a year, but \$100,000 per annum will be available in a few years.

The formal opening of the Foundation was celebrated on March 7, 1914. Addresses were delivered by Dr. Henry S. Pritchett, President of the Carnegie Foundation for the Advancement of Teaching; Dr. Richard M. Pearce, Professor of Research Medicine, University of Pennsylvania; and Hon. Curtis H. Lindley. The policy and work of the Foundation is determined by an advisory board of seven members conferring with the Regents of the University.

The building formerly occupied by the Veterinary School has been devoted by the Regents of the University to the work of the Foundation. Dr. George H. Whipple, formerly Associate Professor of Pathology in Johns Hopkins University, is Director, and is also Professor of Research Medicine in the Medical School. The work of the Hooper Foundation, therefore, is closely correlated with that of the Medical School. Men at work in the Research Laboratory have free access to the University Hospital wards and positions in the Hooper Foundation will be available for men in the Medical School who desire to enter a career in research medicine. The work of the Hooper Foundation in no way replaces any of the research in the various departments of the Medical School.

**REQUIREMENTS FOR ADMISSION  
AND FOR GRADUATION**



## REQUIREMENTS FOR ADMISSION\*

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A preliminary collegiate preparation is required for the course in medicine, and men and women are admitted on the same terms. As candidates for the degree of Doctor of Medicine the school receives the following:

1. Graduates of approved colleges or scientific schools who present evidence of a satisfactory training in chemistry, physics and zoology and a reading knowledge of German or French. The courses in chemistry must include inorganic and organic chemistry.

2. Students in the College of Letters and Science of this University who have attained senior standing may, at the beginning of their fourth or senior year in the University, register as students in the Medical School, and upon completion of the first year in the Medical School may receive the bachelor's degree in the College of Letters and Science. Such students must also furnish evidence that they have had a satisfactory training in chemistry, physics, and zoology, and that they possess a reading knowledge of German or French.

3. Students who has satisfactorily completed at least two full years of collegiate work and who have received the junior certificate of this University, or its equivalent.

The studies pursued during the two years which lead to the junior certificate include one year of English literature and composition, six collegiate units after July, 1919, American history and civics, mathematics, chemistry, biology (zoology), physics, and German or French.† Applicants for admission to the Medical School who have pursued their pre-medical studies in some other university must submit credentials from the institution in which they have studied. This statement should include the number of hours devoted to classroom and laboratory work and also the grade received in each subject. For the guidance of those who wish to arrange their preliminary training the following courses given in this University present the minimum of satisfactory preparation in the sciences named (numbers refer to the Announcement of Courses for 1918-19): Chemistry 1A-1B, 9; Physics 2A-2B, and 3B; Zoology 1A, 1B, 108. These courses are described below.

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\* All inquiries should be addressed to the Dean of the University of California Medical School.

† Certain state boards of examination require all subjects to be completed before admission to medical study.



## CHEMISTRY

## 1A-1B. General Inorganic Chemistry and Qualitative Analysis.

3 hrs., lectures and quiz, and 4 hrs. laboratory work, throughout the year; 5 units each half-year.

Lectures and quiz.

Professor BRAY, Dr. GIBSON, Dr. EASTMAN, and Mr. LATIMER.

Two sections: M W F, 9; M W F, 10.

Laboratory.

Professor BRAY, Associate Professor BLASDALE, Dr. GIBSON, and Dr. EASTMAN.

Four sections: I, M F, 1-3; II, Tu Th, 9-11; III, Tu Th, 1-3; IV, W, 1-3; S, 9-11. Prerequisite: matriculation chemistry, subject 12b. In special cases students who have credit for matriculation physics may be allowed to take this course without the chemistry prerequisite, but in no case without the written consent of the instructor.

## 8. Elements of Organic Chemistry.

Dr. PORTER.

An introductory study of the compounds of carbon. Recitations and lectures with experimental illustrations. Laboratory course 9 should, if possible, accompany this course.

Either half-year. Tu Th S, 8.

## 9. Elements of Organic Chemistry: Laboratory.

Dr. PORTER.

A comparative experimental study of the physical properties and chemical reactions of the more commonly occurring classes of organic substances. Supplementary to course 8 and open to all students enrolled in that course.

6 hours in the laboratory and one quiz period; either half-year. M W F, 1-4.

## PHYSICS

## 2A-2B. General Physics.

Professor LEWIS and Associate Professor MINOR.

Lectures with experimental illustration and problems. Properties of matter, mechanics, heat, sound, light, electricity, and magnetism.

3 hrs., throughout the year. Prerequisite: matriculation subject 11, which may be waived in cases of distinct merit. Some knowledge of plane trigonometry is desirable. Sec. I, elective in the College of Letters and Science, M W F, 3, Professor Lewis. Sec. II, primarily for pre-medical students, Tu Th S, 11, Associate Professor Minor.

**3a. Physical Measurement.****Associate Professor MINOR.**

Experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. Methods are selected so as to show instructive relations of physical principles and their adaptation to practical problems. Laboratory exercises twice a week. This course is usually taken in conjunction with 2A-2B.

6 hrs., second half-year; 2 units. Sec. I, M F, 1-4; II, Tu Th, 1-4; III, W, 1-4; S, 8-11. Prerequisite: matriculation subject 11.

**ZOOLOGY****1A. General Zoology.**

Professors KOROD and HOLMES, Associate Professor DANIEL, Assistant Professors LONG, COBT, Dr. BARROWS, and Assistants.

An introduction to the facts and principles of animal biology, with special reference to the structure, functions, and evolution of animal life.

Lectures, 2 hrs., laboratory, 4 hrs., first half-year; 4 units. Lectures, Tu Th, 10; laboratory sections: I, M W, 8-10; II, M F, 2-4; III, Tu Th, 8-10; IV, Tu Th, 2-4; V, W, 2-4; S, 9-11 or 10-12.

The laboratory exercises are essentially illustrative of lectures and are based on the examination of living and prepared specimens, supplemented by models and charts. Professor Cort in charge.

**1B. General Zoology.****Associate Professor DANIEL and Assistants.**

A continuation of course 1A. The behavior, structure, and development of animal types, with special reference to the lower vertebrates.

6 hrs., second half-year; 4 units. Lectures, Tu Th, 10; laboratory, three sections: I, Tu Th, 8-10; II, Tu Th, 2-4; III, W, 2-4; S, 9-11. Prerequisite: course 1A.

**108. Embryology.****Assistant Professor LONG.**

The phenomena of animal development, fundamental facts of reproduction, comparative embryology and organogeny of the higher vertebrates. Lectures, reading, and laboratory.

8 hrs., second half-year; 4 units. Lectures, Tu Th, 9. Laboratory, two sections: I, Tu Th, 8-9, 10-12; II, Tu Th, 1-4. Prerequisite: courses 1A and 1B.

The following courses offered in the Summer Session of 1918 may be substituted for those of the above designated by similar numbers.

## PHYSICS

## S3AB. Physical Measurement.

A laboratory course in general physics, offering opportunity for experimental work in mechanics, properties of matter, heat, sound, light, electricity and magnetism, requiring quantitative results. The course, in detail, will be adapted to the needs of individual students and may cover any portion of the laboratory work of the regular session. Credit, not to exceed 4 units, may be given for the course.

M Tu W Th F, 9-12 and 1-4.

## ZOOLOGY

## S108. Embryology.

Mr. TAYLOR.

The fundamental facts of reproduction, the early stages of development of vertebrates, the formation of organs, and the foetal membranes of mammals, including man. Laboratory study of preparations of chick and pig embryos. Lectures, demonstrations. Laboratory fee \$5, of which \$3 will be retained and the balance, after deducting for breakage, refunded. 4 units.

M Tu W Th F, 8-12.

In preparation for these studies it may be mentioned that high school physics and chemistry are necessary in order to enroll in the beginning university courses in the same subjects. Whereas these requirements as specified will be accepted for admission in the medical school, it should be pointed out that it is highly desirable that the student should not content himself with the acquisition of a junior certificate, but should take at least three years of college work, if possible. By this means not only is more time offered for work in subjects of general culture outside the scientific requirements but by a combined eight-year course (three years as an undergraduate in the university and five years in the medical school) the two degrees of A.B. and M.D. may be obtained.

Students taking the combined course have the privilege of broad election from the various departments of the University, and they are advised to make their selection from subjects not related to the specific requirements.

The faculty of the Medical School is authorized to refuse admission to students who have a low academic record.

## ADMISSION TO ADVANCED STANDING

Applicants for admission to advanced standing may become candidates for the degree of M.D. under the following conditions: (1) They must furnish evidence that they were eligible for admission to the first year

of this school. (2) They must show that courses equivalent in kind and amount to those given in this school in the year or years preceding that to which admission is desired have been satisfactorily completed in an acceptable medical school.\* Students taking work at a college with a lower classification will not be granted credit. (3) At the discretion of the Dean, they must be prepared to pass examinations in those subjects for which they ask credit.

### INSTRUCTION FOR GRADUATES IN MEDICINE

Graduates in medicine may arrange with the heads of the different departments for special work. Graduate students may enter at any time during the year and must register at the Dean's office before beginning work.

Except under extraordinary circumstances and at the discretion of the Advisory Board of the Medical Faculty, persons who have already received the degree of Doctor of Medicine will not be admitted as candidates for that degree from this University.

### CLASS STANDING AND EXAMINATION

The judgment of an instructor upon the work of a student may be determined by (a) personal contact and observation of routine work, (b) by oral, written or practical examination, (c) by a combination of these methods.

It is optional with each department whether students are examined at the end of each course or examined when the work of a department is completed.

For the determination of the students' right to advancement and graduation each department makes such rules as it deems necessary, and the result is indicated as "Passed with Honor," "Passed," or "Not Passed."

At the end of the third half-year and at the end of the period of required work the students' records are referred to the respective committees on instruction for review. Students who fail to pass in any two major subjects, in one major and three minor subjects, or in six minor subjects may be dropped from the Medical School. Students who fail to pass in a major subject or in three minor subjects will be placed on probation and must take a second examination before the following half-year. Students who fail in the second examination may be dropped from the Medical School.

\* By an acceptable medical school is meant one classified as "A" by the American Medical Association, and whose entrance requirements are equivalent to those of this School.

Students who have an unabsolved failure in any one subject of the first three half-years will not be permitted to enter the third year except by recommendation of the Advisory Board of the Medical School.

Students who have an unabsolved failure at the end of the fourth year will not be recommended as entitled to the degree of Doctor of Medicine or permitted to enter their intern year until the failure is absolved in such manner as may be indicated by the Advisory Board of the Medical School.

The Faculty reserves the right to sever the connection of any student with the Medical School at any time for what it deems either mental, physical, or moral unfitness for a career in medicine.

#### LEAVES OF ABSENCE

Students who withdraw from the Medical School without notice or who fail to report after a leave of absence may have their connection with the Medical School terminated.

#### REQUIREMENTS FOR GRADUATION

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years and must be of good moral character. He must have studied medicine for four full years, must have attended four annual courses as a matriculated student, the last of which has been spent in this school, and must have satisfactorily completed his fifth or intern year. He must have completed the required work, have fulfilled satisfactorily all special requirements, and have received a satisfactory grade throughout the entire medical course. He must have discharged all indebtedness to the school.

#### FIFTH YEAR

Students are required to supplement the academic course in medicine with a year as intern in an approved hospital or laboratory, or as a special worker in a department of the Medical School. Qualified students may take their year's laboratory work after the third semester.

#### CURRICULUM IN PUBLIC HEALTH

At the beginning of the second half of the fourth year in the Medical School students may elect to enter Public Health Curriculum C. This curriculum extends over a year and a half, and on its satisfactory completion the candidate is granted the degrees of Doctor of Medicine and Graduate in Public Health (Gr.P.H.).

The first year is devoted to courses offered by the various colleges of the University in Berkeley and the last half-year is devoted to work given in the Medical School.

## PUBLIC HEALTH CURRICULUM C

## FOURTH YEAR IN MEDICINE

*Second Half-year (Berkeley)*

Subjects	Units
Civil Engineering 124 .....	3
Civil Engineering 128 .....	3
Economics 140 .....	3
Entomology 126 .....	3
Entomology 127 .....	2
Hygiene 104 .....	3
Hygiene 108B .....	3
	<hr/>
	19

## FIFTH YEAR IN MEDICINE

*First Half-year (Berkeley)*

Subjects	Units
Civil Engineering 125 .....	2
Hygiene 107 .....	3
Hygiene 108A .....	3
Political Science 115 .....	2
Veterinary Science 117 .....	3
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	13

*Second Half-year (Medical School)*

Assignments	Units
San Francisco Health Department .....	4
Social Service Department .....	4
State Board of Health .....	4
Field Work in Epidemiology Research (with thesis) .....	4
	<hr/>
	16

For students in public health and graduates in sanitary engineering provision is made in Public Health Curricula A and B, each leading to the degree of Graduate in Public Health. The instruction of the last year in each of these two curricula is given in the Medical School. Outlines of these curricula will be found in the *Announcement of the Graduate Division* and the *Circular of Information, Academic Departments*.



## GENERAL INFORMATION





## REGISTRATION

Applications for admission and for advanced standing must be addressed to the Dean of the Medical School, San Francisco. *They must be received at least one month prior to the beginning of the term, to allow time for investigation.*

Students will not be admitted to medical courses until they have registered at the office of the Secretary of the Medical School, Parnassus and Second avenues, San Francisco.

## FEES

The charge for tuition is one hundred and fifty dollars per annum, payable in two installments, August and January. Students will not be admitted to the courses until they have paid their fees for the ensuing half-year. A key and breakage deposit of \$25 in the first and second years and of \$10 in the third and fourth years is required for the use of lockers and to cover the cost of material used in laboratories and possible damage to college buildings and equipment.

In the first year there is an additional fee of \$15 for dissecting material, \$5 for each part.

During the first year and a half an Infirmary and Gymnasium fee of \$5 per half-year is required.

Students not registering on the dates announced will be charged \$2 additional.

Students not appearing for examinations on specified dates will be required to pay a fee of five dollars for a special examination.

Students registered in the Medical School and taking less than the required amount of work in any given half-year are required to pay a proportionate fee for tuition. Such students must first obtain the permission of the Medical Faculty.

## MICROSCOPES AND BLOOD-COUNTING APPARATUS

Students are advised to purchase their own microscopes, but those who do not care to do so may rent one from the school at a cost of five dollars per annum, with an additional charge of two dollars if an oil immersion lense is desired. Students using microscopes which belong to the school are liable for damage done the instruments while in their possession.

*The character of the practical work requires that each student own a blood-counting apparatus and ophthalmoscope. These should be purchased at the beginning of the second half of the second year.*

Students are also required to supply themselves with the necessary slides and coverslips.

### MEDICAL SUPERVISION OVER STUDENTS

Each year the faculty appoints a medical adviser to the students in the Medical School. This officer keeps a definite hour for consultation and when necessary visits students in their homes. Through him the services of specialists are secured when indicated.

Students of the first- and second-year classes are entitled to the advantages offered by the University of California Students' Infirmary in Berkeley. Students resident in Berkeley and requiring hospital care are provided for in the Infirmary, unless special nurses are necessary. Students of the third and fourth classes are similarly provided for in the University Hospital. A number of beds have been endowed for this purpose.

Medical students, as well as all other students, in the University of California are required to pass a physical examination by the Medical Examiner before entrance to the University.

### LIBRARIES

Instruction in the medical sciences and the various branches of clinical medicine is incomplete without constant reference to current and authoritative monographic and periodical literature. In research work the need of a complete reference library is obvious.

Each of the departments in Berkeley—Anatomy, Physiology, Biochemistry, Pathology and Bacteriology—contains a separate departmental library which, although a unit of the general University Library, is thus segregated as part of the working equipment of each department. Through the generosity of Mrs. Phoebe A. Hearst and Mrs. William H. Crocker, these departmental libraries are unusually complete; they also participate in the annual distribution of University Library funds.

The library at the Medical School in San Francisco contains a good collection of textbooks and monographs, which is increased each year through a special annual appropriation. The best current journals in French, German, and English are on file. A trained librarian is in charge of this library.

### LABORATORIES AND CLINICAL OPPORTUNITIES

Medical instruction of the first year and a half is carried on in the separate departmental buildings of Anatomy, Physiology, Biochemistry, and Pathology and Bacteriology situated on the University Campus in Berkeley. The present laboratory buildings are regarded as temporary, but are spacious and easily increased in size to meet growing demands; they are fully equipped not only for teaching but for research.

A new students' laboratory has been equipped in one of the existing buildings in San Francisco. This is used for instruction in clinical pathology, taught in the second half of the second year and also used

by the students of the third and fourth years, to perform their necessary individual laboratory work. The various clinical departments have laboratories situated in the buildings in San Francisco.

#### THE UNIVERSITY HOSPITAL

The University Hospital is essentially a teaching hospital under the control of the Board of Regents of the University of California. The medical affairs of the hospital are so managed as to secure the most thorough utilization of the patients for the purpose of instruction and research.

Several endowment funds and the support of the University make free beds available for the study of interesting and unusual cases. The Associated Charities of San Francisco send to the hospital a number of deserving patients. Clinical material also is drawn from distant points. It is aimed to make this hospital a consulting place, to a great extent, for physicians of the State, a place where patients unable to pay for costly examinations or expert opinion may be sent for further investigation, returning to their own physicians with a report of the findings.

The new hospital building was erected and equipped by friends of the University at a cost of about \$750,000. It is located on Parnassus avenue, between Third and Fourth avenues, directly adjoining the Medical School. The site overlooks Golden Gate Park, the Presidio of San Francisco, San Francisco Bay, and the Pacific Ocean.

The hospital has a capacity of 220 beds, of which 50 are assigned to each of the following services, viz.: medicine, surgery, women's, and pediatrics. These different divisions are separated into distinct units, each pavilion extending back from the upper two floors of the main hospital building.

The main building is seven stories in height and extends along the entire Parnassus avenue frontage.

The floors are devoted respectively (1) to engine room, power plant, laundry and storage accommodations; (2) to kitchens, dining-rooms, laundry and receiving department for ambulance patients; (3) the main or administrative floor, to students' lobby, and students' recreation room. At the extreme western end of this floor are quarters for the house staff; on this floor also are the offices of the department chiefs; (4) operating rooms and laboratories; (5) actinography, photography, drug department, and isolation department; (6 and 7) ward floors—these are divided into separate units from east to west: (a) medicine, (b) surgery, (c) women's, (d) children's. Each ward unit is provided with its own teaching-room and laboratory.

As the investigation of obscure diseases and the instruction of medical students and post-graduates are two of the chief aims of the hospital, facilities for these purposes have been carefully provided.

There are four main operating rooms and two smaller operating rooms for use of the specialists. A separate entrance and lobby is provided for students. By this arrangement greater privacy is obtained for patients. This arrangement also possesses great advantages for the students as well as the staff.

Similarly throughout the hospital its efficiency as a teaching institution has been kept paramount. The construction is such that the capacity of the hospital may be doubled at comparatively small expense.

#### THE SAN FRANCISCO HOSPITAL

The San Francisco Hospital has occupied its new buildings since July 1, 1915.

The present group consists of an executive building and sixteen large wards, with well arranged service rooms and clinical laboratories adjacent.

One wing contains the surgical unit, with six large operating rooms and the amphitheatre, a well equipped Roentgen-ray department. The City has now completed an Emergency Hospital splendidly equipped as an operative department of the City's emergency service, which gives unexcelled advantages to interns, and students in emergency surgical work.

The pathological building is now nearing completion. On the first floor there is a morgue room, with twenty-four De Camio mortuary slabs, so that bodies may be kept in refrigeration. Adjoining this is a large pavilion and amphitheater for post-mortem work and a series of rooms, kennels for research work, preparation rooms, etc. The second floor, when completed, will be used as the main chemical and biological laboratories of the Department of Public Health. Opportunity will be furnished here for interns to receive instruction in laboratory work, including the examination of milk, water, blood, toxicological specimens and preparation of vaccines.

The post-mortem material in the hospital is invaluable.

The new tuberculosis wards to accommodate 250 beds and the isolation wing of 110 beds for infectious diseases are now in the course of construction.

The Medical School controls approximately 240 beds (exclusive of the tuberculosis wards). These are equally divided for instruction in clinical medicine, clinical surgery, and the specialties. Additional wards are used for the teaching of gynecology and obstetrics and pediatrics. The laboratories adjacent to the wards are fully equipped for the use of interns and students and the new laboratory building will give opportunity for special research.

#### OUT-PATIENT DEPARTMENT

The Out-Patient Department of the University Hospital provides facilities for instruction in all branches of clinical medicine and surgery.

Diseases of every type are treated in the various clinics, each of which is under the supervision of a chief who is responsible for the instruction of the students.

During the third year and the first half of the fourth year groups of students are assigned to the clinics in medicine, surgery, woman's, pediatrics, dermatology, urology, ophthalmology, laryngology, orthopedic surgery, etc. In the last half of the fourth year students may elect to act as clinical clerks in some of the departments mentioned.

A large and varied clinical material is available and each year the growth of this department has been manifested by a continuous increase in the number of patients treated during the year. At present the daily average number of visits to the clinics is over 300. On account of this increase, clinics are being started in the afternoons to take care of the overflow. At these afternoon clinics in pediatrics fourth year students are assigned for definite clinical work. With this exception, all clinics are held simultaneously in the morning, so that patients may be referred from one clinic to another with great facility.

#### SOCIAL SERVICE DEPARTMENT

The Social Service Department has been thoroughly organized for the past two years. During 1916-17-18 there have been workers in the medical, woman's and children's clinics, and in addition voluntary assistance by students of the University has aided materially in carrying on the work of this department. The Social Service Department is in touch with all the various sources for medical care throughout the city, which very greatly facilitates the referring of cases to and from institutions and associations. A course for social service workers is being offered by the department in conjunction with the Department of Social Economics of the University. This work is under the direction of Dr. Louise Morrow, Director of the Department of Nursing and Lecturer in the Medical School. The Hospital is now arranging a course for properly prepared students in Social Service work.

#### TUBERCULOSIS CLINICS

The Department of Tuberculosis is under the charge of Dr. George H. Evans and is now maintained in conjunction with the San Francisco Society for the Study and Prevention of Tuberculosis. Dr. Evans is also in charge of the University of California Medical School's service at the tuberculosis wards of the San Francisco Hospital. By this arrangement tuberculous patients of all types are available for investigation and teaching purposes.

**THE CANCER WARD**

Through the generosity of a friend of the Medical School a ward in the hospital is reserved for the treatment of patients suffering from malignant diseases. Advanced and inoperable cases are received, as well as those not too far advanced to be benefited by surgical or other treatment. Thus the variety of cases and the long residence of certain of them afford an unusual opportunity to observe all phases of malignant diseases.

**THE HOOPER FOUNDATION FOR MEDICAL RESEARCH**

The institution is located in a building adjacent to the hospital and its Director is also Professor of Research Medicine in the Medical School. A number of beds in the hospital are at the disposal of the Foundation and are occupied by patients suffering from diseases which at the moment are the subject of study and investigation by members of the Research Laboratory staff.

Professor Whipple and his associates offer elective courses to the medical students and a limited number of students may undertake research problems. The selection of such students will depend upon their fitness for this work. Opportunities also will be afforded graduates in medicine who wish to enter upon a career of research.

**TEACHING FACILITIES AT THE CHILDREN'S HOSPITAL**

An agreement with the Hospital for Children and Training School for Nurses adds a large amount of available teaching material. The children's medical, surgical, and orthopedic services have about seventy beds available for teaching purposes, and with the contagious pavilion the opportunities for instruction are very good. Opportunities for small sections to elect work in the Children's Hospital is possible.

**COURSES IN HOMEOPATHY**

The Regents of the University on January 1, 1919, accepted the Hahnemann Hospital as a gift. Through this magnificent gift there comes into the control of the University a hospital of 125 beds in which is to be developed a department in connection with Industrial Medicine, organized and officered by members of the Faculty. In 1918 the Hahnemann Medical College of the Pacific was abandoned and its property deeded to the University which now offers electives in Homeopathy in the University of California Medical School upon the following basis:

1. Beginning in August, 1915, all students matriculating in medicine must fulfill the requirements demanded by the University of California Medical School.

2. Instruction in Homeopathy is in charge of two professors, a Professor of Homeopathic Materia Medica and a Professor of Applied Homeopathic Therapeutics.

3. All students in the first two years take all work in common except in Materia Medica. In this subject 32 hours of so-called "Regular" Materia Medica and 32 hours of Homeopathic Materia Medica is given in the second half of the second year. Students may elect either one of these courses and hours of instruction are so arranged as to permit of election of both courses by all students who may so desire.

4. In the third and fourth years all students take the same courses except in Materia Medica and Therapeutics and Clinical Medicine. Elective courses in these subjects is offered so that students may choose whether they take work under instructors of the so-called "Regular" or of the "Homeopathic" school.

#### SCHOLARSHIPS

Through the generosity of Mrs. Frances B. Sanborn, one of the three scholarships known as the Sheffield Sanborn Scholarships has been assigned to the Medical School. This scholarship yields \$250 per annum at present and is open only to students who have not yet received the degree in medicine and who otherwise would not have the opportunity to acquire a university training.

The Willard Thompson Scholarship is open to students of the Medical School who are residents of Utah. This scholarship yields \$600 per annum.

Recently the alumni of the Medical School have established a scholarship known as the "William Watt Kerr Scholarship in Medicine." It yields \$400 per annum and is awarded to a worthy student of the Medical School.

Applications for these scholarships should be filed with the Recorder of the Faculties by March 1 of each year. A blank form of application may be obtained from the Recorder of the Faculties at Berkeley.

#### FELLOWSHIPS

Three fellowships are offered by the George Williams Hooper Foundation for the year 1918-19. Each student fellow receives a grant of \$600 and is charged no medical school nor laboratory fees. Applicants must have had at least one and one-half years of medical school training in the University of California Medical School or its equivalent. A year is devoted to this work, and consists mainly of research in experimental medicine. This work will be in part independent but in part cooperative research with other members of the laboratory staff. The fellow is expected to do some advanced work in gross pathology, and get a



broad training in pathological anatomy. The work of this fellowship should give the research fellow exceptional training in the fundamental medical sciences and a broader outlook in general medicine. The value of this fundamental training to the medical student can not be overestimated, and a true understanding of research medicine can be obtained in no other way.

The work done under this fellowship, if satisfactory, may count as the fifth year in medicine. If the necessary preliminary requirements have been fulfilled, it may also count toward the attainment of other graduate degrees (Master's degree or Doctor of Philosophy).

#### HOSPITAL APPOINTMENTS

Internships in the University Hospital are open to fifteen graduates of the University of California Medical School or of some other approved medical school. Fourteen interns are assigned to the various clinical departments and one as pathological intern. Interns serve for one year, without salary. The appointments are made upon the recommendation of the Advisory Board of the Medical School, which takes into account both the character of the work of the candidate throughout his entire career in the Medical School and also his general fitness.

The Medical School supplies sixteen internships in the San Francisco Hospital open to members of the graduating class. The Medical School also supplies internships at the Hahnemann Hospital.

The Regents of the University have provided positions for residents in medicine, surgery, obstetrics and gynecology, and pediatrics, and assistant residents in surgery, gynecology and obstetrics and pediatrics at the University Hospital. These appointments, not necessarily limited to one year, are open to graduates in medicine who have had previous hospital experience and possess suitable qualifications for the work. The residents receive \$600 and the assistant residents \$300 a year and accommodations in the hospital.

The positions of House Physician, House Surgeon, and House Gynecologist on the University of California Medical School service at the San Francisco Hospital have been established.

#### LOAN FUND

Through the generosity of an alumnus of the Medical School a small sum of money has been set aside to be loaned to needy students of the upper classes. Applications for loans should be addressed to the Secretary of the Medical School.

# **PLAN OF INSTRUCTION AND ANNOUNCEMENT OF COURSES**



## PLAN OF INSTRUCTION

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### GENERAL STATEMENT

The instruction in the Medical School begins coincidentally with that of other departments of the University. During the session 1918-19, because of the war, the term opened the first of October and closes the fourth of June, instead of the usual plan of the University.

While all the students liable to military service were members of the S. A. T. C. the academic year was divided into trimesters. With the disbandment of the S. A. T. C. the University has returned to the semester plan, the second term beginning January 13th and extending to June 4, 1919.

The chief aim of the school is to develop medical practitioners and to offer facilities which will enable qualified students to prepare themselves for special medical work. The faculty is in sympathy with the principle which allows the student great freedom in choosing the direction his studies shall take. A system of instruction has been inaugurated which will permit wide choice in selecting the work of the last half of the fourth year.

The course of instruction is in harmony with the principles adopted by the Association of American Medical Colleges. Following the terminology employed by that association, the amount of work required in various subjects is indicated by the number of hours devoted to them. But in the case of the fundamental sciences—*anatomy, physiology, biological chemistry, pharmacology, pathology, and bacteriology*—the courses are also assigned a "unit" value such as other departments of this University employ. This expression is used since, under certain conditions, the subjects mentioned may be elected by non-medical students to fulfill the requirements for degrees other than the medical. In so far as the courses required for medical students are concerned, these units have no particular significance. The elective courses in these departments, however, may be taken by medical students in fulfilling requirements for a Master's degree, and the required courses may be counted in the combined course as fulfilling units for the A.B. degree, as well as part of the work for the M.D. degree.

In general, the University has adopted, as a standard, a unit of sixteen hours of didactic teaching, or forty-eight hours of laboratory work. The

unit of demonstrative or clinical teaching occupies a middle ground of thirty-two hours. Thirty-two units represent the work of the average year. Exceptional students can carry two to four units more.

In general, the five years curriculum leading to the degree of Doctor of Medicine falls into four periods: first, that devoted to the fundamental medical sciences; second, that occupied by clinical instruction; third, the elective period; and fourth, the intern or laboratory year.

As the requirements for admission are such that the student enters after he has received training in physics, inorganic and organic chemistry, and biology, these subjects are not taught in the medical school. The first period of instruction covers three half-years and is devoted to anatomy, histology, physiology, biological chemistry, bacteriology, and pathology. Nearly all the work in these subjects is obligatory. They provide the basis for the study of clinical medicine; and the laboratory instruction which occupies the major portion of the student's time during this period is planned to develop powers of accurate observation.

Clinical instruction begins with the second half of the second year. The initial courses in medicine and surgery deal chiefly with the problems of diagnosis. They aim to train further the faculty of critical observation and to instill into the student good habits in taking case-histories and in carrying out systematically the examination of patients. In this half-year also *materia medica*, pharmacology, preventive medicine and hygiene, clinical pathology, ophthalmoscopy and elementary neurology, dermatology and obstetrics are taught.

Obligatory clinical instruction continues through the third year, and is given in the classroom, the clinical laboratory, the dispensary, and at the bedside. In the Out-Patient Department students take the histories of patients and make the necessary examinations under the direction of the attending staff. In the wards of the University Hospital and the San Francisco Hospital they are assigned cases for thorough study and have every opportunity to become familiar with therapeutic methods. In this year some of the major subjects are completed. During the first half of the fourth year the required work in medicine, surgery, gynecology, pediatrics and the various specialties are completed.

During the term beginning January 13, 1919, the elective period consists of the last eight weeks of the second term. All departments of the school offer optional work, and in general three possibilities are open to the student: (a) he may elect a number of short courses with a view to becoming a general practitioner; (b) he may select a few long courses looking toward a career in some special field of practice; (c) he may devote his time to the laboratories of the fundamental sciences for the purposes of training as a teacher and investigator.

# **FIRST YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
Histology .....	192
Anatomy .....	496
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	688
<b>Second half-year:</b>	
Neurology .....	80
Physiology .....	336
Biochemistry .....	272
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	688

# **SECOND YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
Topographical Anatomy .....	72
Bacteriology and Protozoology .....	170
Immunology .....	118
	<hr/>
	360
<b>Second half-year:</b>	
Morbid Anatomy and Histopathology .....	240
Pharmacology .....	100
Materia Medica, etc. ....	40
General Medicine and Clinical Pathology .....	240
General Surgery .....	140
	<hr/>
	760
Homeopathic Materia medica (elective).....	40

**THIRD YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
Preventive Medicine and Hygiene .....	12
Materia Medica, etc. ....	12
Therapeutics .....	36
General Medicine .....	114
Pediatrics .....	48
Neurology and Psychiatry .....	24
Dermatology .....	12
General Surgery .....	72
Ophthalmology .....	42
Obstetrics .....	60
Pathological Demonstrations .....	24
	<hr/>
Applied Homeopathy (elective) .....	24
	<hr/>
<b>Second half-year:</b>	
Therapeutics .....	20
General Medicine .....	148
Pediatrics .....	36
Neurology and Psychiatry .....	96
Dermatology and Syphilis .....	40
General Surgery .....	96
Ophthalmology .....	20
Laryngology .....	56
Urology .....	20
Obstetrics .....	78
Gynecology .....	98
Pathological Demonstrations .....	40
	<hr/>
	748
Applied Homeopathy (elective) .....	40

**FOURTH YEAR**

<i>Subject</i>	<i>Total hours required</i>
<b>First half-year:</b>	
General Medicine .....	120
Pediatrics .....	81
General Surgery .....	108
Orthopedic Surgery .....	33
Urology .....	21
Laryngology, etc. ....	21
Gynecology .....	21
Neurology .....	33
Radiography .....	12
	<hr/>
	450
<b>Second half-year:</b>	
General Medicine .....	180
Pediatrics .....	20
General Surgery .....	130
Orthopedic Surgery .....	43
Urology .....	31
Laryngology, etc. ....	20
Gynecology .....	42
Radiography .....	6
Hygiene .....	40
	<hr/>
	512
Electives .....	336





**SCHEDULES, 1918-19**

**FIRST YEAR  
FIRST HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9						
9-10	Histology EVANS SCOTT	Anatomy *MOODY CORNER	Histology EVANS SCOTT	Anatomy *MOODY CORNER	Histology EVANS SCOTT	Anatomy *MOODY CORNER
10-11						
11-12						Histology Lecture EVANS
1-2						
2-3						
3-4	Anatomy *MOODY CORNER	Anatomy *MOODY CORNER	Anatomy *MOODY CORNER	Anatomy *MOODY CORNER	Anatomy *MOODY CORNER	
4-5						

\* Sabbatical leave.

**FIRST YEAR  
SECOND HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9					Neurology Lecture SMITH	
9-10	Physiology Laboratory	Physiology Laboratory	Physiology Laboratory	Physiology Laboratory	Biochemistry Lecture BLOOR	Physiology Laboratory
10-11					Physiology Lecture BURNETT	
11-12	Physiology Lecture BURNETT	Physiology Lecture MAXWELL	Physiology Lecture MAXWELL	Physiology Lecture MAXWELL		Physiology Lecture MAXWELL
1-2	Biochemistry Lecture BLOOR	Biochemistry Lecture BLOOR	Biochemistry Lecture BLOOR	Biochemistry Lecture BLOOR		
2-3					Neurology Laboratory SMITH SCOTT	
3-4	Biochemistry Laboratory	Biochemistry Laboratory	Biochemistry Laboratory	Biochemistry Laboratory		
4-5						

**SECOND YEAR  
FIRST HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9						
9-10	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES
10-11	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES
11-12	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES	Bacteriology and Immunology HALL BARNES
12-1						
1-3	Bacteriology Lecture HALL BARNES	Immunology Lecture HALL BARNES	Bacteriology Lecture HALL BARNES	Immunology Lecture HALL BARNES	Bacteriology Lecture HALL BARNES	Immunology Lecture HALL BARNES
2-3	Topographical Anatomy CORNER—SCOTT (Electives) EVANS	Topographical Anatomy CORNER—SCOTT (Electives) EVANS		Topographical Anatomy CORNER—SCOTT (Electives) BARNES	Topographical Anatomy CORNER—SCOTT (Electives) EVANS	
3-4	Topographical Anatomy CORNER—SCOTT (Electives) EVANS	Topographical Anatomy CORNER—SCOTT (Electives) EVANS		Topographical Anatomy CORNER—SCOTT (Electives) EVANS	Topographical Anatomy CORNER—SCOTT (Electives) EVANS	
4-5	Topographical Anatomy CORNER—SCOTT (Electives) EVANS	Topographical Anatomy CORNER—SCOTT (Electives) EVANS		Topographical Anatomy CORNER—SCOTT (Electives) EVANS	Topographical Anatomy CORNER—SCOTT (Electives) BARNES	

**SECOND YEAR  
SECOND HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9		Surgery HOAG	Homeopathic Materia Medica (Electives) BOERICKE		Homeopathic Materia Medica (Electives) BOERICKE	Clinical Pathology HURWITZ
9-10				Surgery POPE	Surgery TERRY	
10-11	Physical Diagnosis	Physical Diagnosis	Physical Diagnosis	Surgical Diagnostic Methods	Surgical Diagnostic Methods	
11-12						
12-1	Pharmacology Lectures BENNETT	Materia Medica Lectures and Demonstrations SCHNEIDER	Pharmacology Lectures BENNETT	Materia Medica Lectures and Demonstrations SCHNEIDER		
1-2						Pharmacology Laboratory BENNETT
2-3	Morbid Anatomy and Histopathology RUSK	Morbid Anatomy and Histopathology RUSK	Morbid Anatomy and Histopathology RUSK	Morbid Anatomy and Histopathology RUSK		
3-4						

**THIRD YEAR**  
**FIRST HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Neurology Clinical Lectures LENNON	Therapeutics BINE	Pediatrics Lectures and Demonstrations FLEISCHNER HOLSCLAW	Therapeutics BINE	Pediatrics Lectures and Demonstrations FLEISCHNER HOLSCLAW	
9-10	Medicine Clinical Lectures ALLEN	Ophthalmology Lectures FRANKLIN	Dermatology MORROW	Medicine Clinical Lectures ALLEN	Surgery Recitations POPE	Therapeutics BINE
10-11	<p style="text-align: center;"><b>SECTION WORK</b> <b>Medicine, Surgery, and Ophthalmology</b> <b>at U. C. Hospital</b> (See section schedule)</p>					
11-12						
12-1	Material Medica Lectures SOHNREIDER	Obstetrics Lectures LYNCH SMITH	Obstetrics Lectures LYNCH SMITH	Obstetrics Lectures LYNCH SMITH	Obstetrics Lectures LYNCH	Prevent. Medicine and Hygiene Lectures KELLOGG
1-2						Psychiatry Lectures POBRYATA
2-3	Obstetrics Lectures LYNCH SMITH	Pediatrics Lectures and Demonstrations FLEISCHNER HOLSCLAW				Applied Homeopathy (Electives) HILL
3-4	Applied Homeopathy (Elective) HILL	Pathological Demonstrations RUSK		Pediatrics Lectures and Demonstrations FLEISCHNER HOLSCLAW		
4-5				Pathological Demonstrations RUSK		

**THIRD YEAR  
SECOND HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Neurology Clinical Lectures LENNON	San Francisco Hospital	Surgery Lectures and Demonstrations TERRY	San Francisco Hospital	Surgical Physiology POPE	Surgery Lectures and Demonstrations TERRY
9-10	Medicine Clinical Lectures ALLEN		Dermatology Clinical Demonstrations MORROW		Medicine Clinical Lecture ALLEN	Ophthalmology FRANKLIN
10-11	Section U. C. Hospital		Section U. C. Hospital		Section U. C. Hospital	Psychiatry RICHARDS
11-12	Gynecological Pathology MAXWELL		Obstetrics SMITH		Gynecology MOORE	Laryngology HOUSTON
12-1						
1-2	Therapeutics BINE	Urology Lectures and Demonstrations HINMAN	Applied Homeopathy HILL or BOERICKE	Gynecology Lectures LYNCH	Obstetrical Demonstrations BREITSTEIN	
2-3		Gynecology MAXWELL		Psychiatry PODSTATTA		
3-4	Applied Homeopathy HILL or BOERICKE	Pathological Demonstrations RUSK		Pathological Demonstrations RUSK	Syphilology HARVEY	
4-5						



**FOURTH YEAR  
FIRST HALF-YEAR**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9		Medicine Clinical Demonstrations S. F. H. EBRIGHT	Surgery Lectures and Demonstrations TERRY	Medicine Clinical Demonstrations S. F. H. EBRIGHT		Surgery Lectures and Demonstrations TERRY
9-10		Surgery Clinical Demonstrations S. F. H. BRUNN		Surgery Clinical Demonstrations S. F. H. BRUNN		Radiography BRYAN
10-11	<p style="text-align: center;">SECTION WORK Orthopedic Surgery, Urology, Throat, Pediatrics, Gynecology, and Neurology at U. C. Hospital Medicine and Surgery at S. F. Hospital (See section schedule)</p>					
11-12						
12-12:30						
12:30-1						Pediatrics Lectures ASH PORTER
1-2						
2-3	<p style="text-align: center;">SECTION WORK Medicine, Surgery, and Pediatrics Wards U. C. H. (See section schedule)</p>			<p style="text-align: center;">SECTION WORK Medicine, Surgery, and Pediatrics Wards U. C. H. (See section schedule)</p>		
3-4						
4-5						

**FOURTH YEAR  
SECOND HALF-YEAR**

SECOND HALF-YEAR						
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8-9	Orthopedic Surgery Rounds	Urology Rounds	Surgery Lecture TERRY	Orthopedic Surgery Lecture MARKELL	Surgery Rounds	Surgery Lecture TERRY
8.30-9	Gynecological Operations	Urology Operations	Surgery Operations	Ortho- pedic Surgery Opera- tions	Gynecology Rounds	Radiography BRYAN
9-10						
10-11	<div>SECTION WORK</div> <div>Gynecology, Orthopedic Surgery, and Urology at U. C. Hospital</div> <div>Medicine and Surgery at S. F. Hospital</div> <div>(See section schedule)</div>					
11-12						
12-12:30						
	Laryngology Lectures HOUSTON					

12:30-1						
1-2						
2-3	<p style="text-align: center;"><b>SECTION WORK</b> Medicine, Surgery, and Pediatrics Wards, U. C. H. (See section schedule)</p>		<p style="text-align: center;"><b>SECTION WORK</b> Medicine, Surgery, and Pediatrics Wards, U. C. H. (See section schedule)</p>			
3-4						
4-5					Hygiene KELLOGG	Hygiene KELLOGG



**LIST OF STUDENTS 1918-19**  
**UNDERGRADUATES**



## INTERN CLASS

Mary Isabelle Armstrong, A.B. ....	Piedmont U. C. Hospital.
Thomas Floyd Bell, A.B. ....	Oakland U. C. Hospital.
Charles Barrows Bennett, M.A., Sc.M., Ph.D., M.D. ....	San Francisco Physiology Building, University of California.
Robert Wilson Binkley, A.B. ....	Santa Ana U. C. Hospital.
*Florence Josephine Chubb, B.L. ....	Bakersfield Children's Hospital.
Frederick Carl Cordes, A.B. ....	Los Angeles U. C. Hospital.
Henry Chipman Dodge, A.B. ....	Stockton U. C. Hospital.
Charles Louis Freytag, A.B. ....	San Rafael San Francisco Hospital.
Walter Herbert Frolich, A.B. ....	San Francisco U. C. Hospital.
Cavins Deter Hart, A.B. ....	Colusa San Francisco Hospital.
Mary Ruth Hill, A.B. ....	Carson City, Nevada Children's Hospital.
Harold Homer Hitchcock, A.B. ....	Berkeley U. C. Hospital.
William Patrick Joseph Lynch ....	Stockton U. C. Hospital.
John Gray McQuarrie ....	Beaver City, Utah U. C. Hospital.
Sidney Olsen, A.B. ....	Riverside U. C. Hospital.
Ralph Rabinowitz, A.B. ....	San Francisco U. C. Hospital.
Ethel Lucia Righetti, B.S. ....	San Francisco San Francisco Hospital.
Homer Righetti, A.B., M.S. ....	San Francisco Lieutenant, U. S. Army.
William Dan Sink, A.B. ....	Oakland San Francisco Hospital.
William Otto Solomon, A.B. ....	Eureka San Francisco Hospital.
Laurence Taussig, A.B., M.S. ....	San Francisco U. C. Hospital.
Fletcher Brandon Taylor, A.B., M.S. ....	Pasadena U. C. Hospital.

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\* Deceased.

## FOURTH YEAR CLASS

Philip Howard Arnot, A.B. ....	Placerville
132 Fourth Ave., San Francisco.	
Dorothy Wells Atkinson, A.B. ....	Tacoma, Washington
U. C. Hospital.	
Thomas Fred Ayers, B.S. ....	San Francisco
1006 Page St., San Francisco.	
Myron Murray Booth, A.B. ....	Hutchinson, Kansas
1321 Fourth Ave., San Francisco.	
Edwin Louis Bruck, A.B. ....	St. Helena
1321 Fourth Ave., San Francisco.	
Ruth Burr, A.B. ....	Sacramento
Relief Home, San Francisco.	
Alma Locke Cooke, B.S. ....	Oakland
3700 California St., San Francisco.	
Randolph Davis ....	St. Mary's, Ontario, Canada
1244 California St., San Francisco.	
Charles Beebe Fowler, A.B. ....	San Francisco
335 Lawton St., San Francisco.	
Mervyn Francis Frandy, A.B. ....	Grass Valley
2442 Bush St., San Francisco.	
Lloyd Elliott Hardgrave ....	Taylorville
1308 Fourth Ave., San Francisco.	
Charles Edward Locke, Jr., A.B. ....	Los Angeles
1321 Fourth Ave., San Francisco.	
Frederick George Maggs ....	San Francisco
55 Alpine Terrace, San Francisco.	
Robert Carson Martin, A.B. ....	Portland, Oregon
1321 Fourth Ave., San Francisco.	
Belle Ellingsen Merrill ....	Oakland
1271 Fourth Ave., San Francisco.	
Oscar Kempfer Mohs, A.B. ....	San Francisco
1200 Third Ave., San Francisco.	
Lois Pendleton, A.B. ....	Los Angeles
3700 California St., San Francisco.	
Alverda Elva Reische, A.B. ....	Meridian
139 Hugo St., San Francisco.	
Bert Stanford Thomas, A.B. ....	San Francisco
2869 Bush St., San Francisco.	
Harold Guyon Trimble ....	Oakland
386 Oakland Ave., Oakland.	

## THIRD YEAR CLASS

*Percival Leonard Ansell .....	Oakland
Thomson Building, Oakland.	
Dexter Rankin Ball, A.B. ....	San Francisco
1425 Fifth Ave., San Francisco.	
Arthur Elmer Belt, A.B. ....	Huntington Park
2126 Bancroft Way, Berkeley.	
C. Coleman Berwick, A.B. ....	Berkeley
165 Sixteenth Ave., San Francisco.	
William Henry Bingaman .....	Gonzales
1425 Fifth Ave., San Francisco.	
Marmion Hugo Childress, A.B. ....	Berkeley
Relief Home, San Francisco.	
Zach Benjamin Coblentz, A.B. ....	Santa Maria
1248 First Ave., San Francisco.	
John Carey Dement, Jr. ....	San Diego
Merrill Apts., Berkeley.	
Waldron Ashley Gregory, A.B. ....	Berkeley
9 Eaton Court, Berkeley.	
Franklin Isadore Harris, A.B. ....	San Francisco
291 Carl St., San Francisco.	
Hal Rexford Hoobler, B.S. ....	Bay City, Michigan
1425 Fifth Ave., San Francisco.	
Hubbard Spencer Hoyt, A.B. ....	Pacific Grove
1332 Sixth Ave., San Francisco.	
George Shigeki Iki, A.B. ....	Berkeley
85 Scott St., San Francisco.	
Demetrio Eugene Jeffry, B.A. ....	Healdsburg
1391 Fifth Ave., San Francisco.	
Charles Krank Keith, A.B. ....	Berkeley
1640 Posen Ave., Berkeley.	
John Joseph Kingston .....	San Francisco
320 Pierce St., San Francisco.	
Frank Yoshimi Kitsuda, A.B. ....	San Francisco
1291 Stanyan St., San Francisco.	
Kunisada Kiyasu, A.B. ....	Anaheim
1291 Stanyan St., San Francisco.	
Ewald Axel Larson, A.B. ....	Kingsburg
1281 Second Ave., San Francisco.	
Clarence Griffith Potter .....	San Francisco
836 Clayton St., San Francisco.	
John Jacob Sampson .....	San Francisco
Palace Hotel, San Francisco.	

\* On leave.



Richard George Scribner, A.B. ....	San Francisco
41 Woodland Ave., San Francisco.	
Frederick Paxton Shafer, A.B. ....	El Centro
1442 Fifth Ave., San Francisco.	
Jay Randolph Sharpstein, A.B. ....	San Francisco
131 Hugo St., San Francisco.	
Edward Byer Shaw, A.B. ....	Oakland
1425 Eighth Ave., San Francisco.	
Henry Silbermann ....	San Francisco
1372 McAllister St., San Francisco.	
Morris Harold Silverberg ....	San Francisco
810 McAllister St., San Francisco.	
*Harry Pratt Smith, A.B. ....	Oakland
301 Hugo St., San Francisco.	
Homer Ignatius G. Sussdorff, A.B. ....	San Francisco
1231 Market St., San Francisco.	
Claude Verner Thompson, A.B. ....	Orland
1281 Second Ave., San Francisco.	

## SECOND YEAR CLASS

Fred Harold Allen, A.B., M.A. ....	Vallejo
1361 Third Ave., San Francisco.	
Robert Emmet Allen, A.B. ....	San Francisco
1336 Eleventh Ave., San Francisco.	
Harry Henry Appeldorn, A.B. ....	Berkeley
1367 Third Ave., San Francisco.	
Hubert Rogers Arnold, A.B. ....	Seaside, Oregon
2606 Bancroft Way, Berkeley.	
John Dryer Ball, A.B. ....	Santa Ana
1391 Fifth Ave., San Francisco.	
William Lee Bender, A.B. ....	San Francisco
2646 Dwight Way, Berkeley.	
Thomas Stanley Burns, A.B. ....	San Francisco
346 Lake St., San Francisco.	
Pan Stamatiou Codellas ....	San Francisco
557 Kearny St., San Francisco.	
William Hugh Chisholm, A.B. ....	Berkeley
2021 University Ave., Berkeley.	
Nelson Daryl Davis, A.B. ....	Ceres
1254 Fifth Ave., San Francisco.	
Guillaume Daniel Delprate, Jr., A.B. ....	Melbourne, Australia
1453 Tenth Ave., San Francisco.	

\* On leave.

Granville Sinclair Delamere, A.B. ....	Berkeley
2612 Piedmont Ave., Berkeley.	
Philip Joseph Dick, A.B. ....	Fresno
1363 Fifth Ave., San Francisco.	
Hugh Frederick Dormody, A.B. ....	Placerville
1391 Fifth Ave., San Francisco.	
Daniel Parsons Foster, A.B. ....	Portland, Oregon
764 Cole St., San Francisco.	
Thomas Essington Gibson, A.B. ....	Ojai
1309 Sixth Ave., San Francisco.	
Horace John Hall ....	Newtown, Newfoundland
1369 Fifth Ave., San Francisco	
Thomas Gerald Hall, A.B. ....	San Francisco
666 Grove St., San Francisco.	
Elzaido Hanson, B.S. ....	Fortuna
1539 Clay St., San Francisco.	
James Edward Harbinson, A.B. ....	Sacramento
2333 College Ave., Berkeley.	
George Carl Hensel, A.B. ....	Eureka, Utah
1427 Willard St., San Francisco.	
Philip Hodgkin ....	Berkeley
1363 Fifth Ave., San Francisco.	
Milan E. Hunt, B.S. ....	San Francisco
21 Buena Vista Ave., San Francisco.	
Jens Peter Jensen, B.S. ....	Spokane, Washington
Bancroft Hotel, Berkeley.	
Evan Merlin Jones ....	Sacramento
Hotel Larne, San Francisco.	
Karl Eliot Kennedy, A.B. ....	Los Angeles
1271 Fourth Ave., San Francisco.	
William Amos Key, B.S. ....	Fullerton
1285 Second Ave., San Francisco.	
William Sherrill Kiskadden, A.B. ....	Tulsa, Oklahoma
1439 Fifth Ave., San Francisco.	
Adolph A. Kutzmann, A.B. ....	Los Angeles
1423 Ninth Ave., San Francisco.	
Marian Dwight Lockwood, A.B. ....	Pasadena
1212 Arguello Blvd., San Francisco.	
John Joyce Loutzenheiser, A.B. ....	Oakland
6142 Hillegass Ave., Oakland.	
Fraser Lapp Macpherson, A.B. ....	San Diego
2609 LeConte Ave., Berkeley.	
Irvine McQuarrie, A.B. ....	St. George, Utah
1254 Fifth Ave., San Francisco.	

Edmund J. Morrissey, A.B. ....	San Francisco
1844 Laguna St., San Francisco.	
Frederick Conners Nass, B.L. ....	San Francisco
121 Broderick St., San Francisco.	
Willard Hodges Newman, A.B. ....	San Diego
2228 Durant Ave., Berkeley.	
Elwood Richard Olsen, A.B. ....	San Francisco
153 Alpine Terrace, San Francisco.	
Gilbert L. Patterson, A.B. ....	Stockton
1427 Willard St., San Francisco.	
George Henry Sanderson ....	Stockton
1439 Fifth Ave., San Francisco.	
Hans Frank Schluter, A.B. ....	Oakland
1363 Fifth Ave., San Francisco.	
Richard O. Schofield, A.B. ....	Sebastopol
1264 Second Ave., San Francisco.	
Eberle Charles Sheldon, A.B. ....	San Francisco
1367 Third Ave., San Francisco.	
Paul Baldwin Shuey, A.B. ....	Oakland
1829 Adeline St., Oakland.	
Milton Silver, A.B. ....	Los Angeles
1271 Fourth Ave., San Francisco.	
Sydney Kinnear Smith, A.B. ....	Berkeley
1285 Second Ave., San Francisco.	
Francis Scott Smyth, A.B. ....	Portland, Oregon
1453 Tenth Ave., San Francisco.	
Henry Edwin Stafford ....	Salinas
1361 Third Ave., San Francisco.	
Monroe Sutter ....	Berkeley
2024 Virginia St., Berkeley.	
Emmett C. Taylor, A.B. ....	Grass Valley
1363 Fifth Ave., San Francisco.	
Michael Angelo Torrano ....	Oakland
717 Fifth St., Oakland.	
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121 Broderick St., San Francisco.	
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1511 Shrader St., San Francisco.	
Stafford L. Warren, A.B. ....	Hayward
600 Geary street, San Francisco.	
Frank Willis Yocom, B.S. ....	Pasadena
3239 Ellis St., Berkeley.	

## FIRST YEAR CLASS

Ernest Green Allen, B.L. ....	Upper Lake
1732 Milvia St., Berkeley.	
Edward Saunders Babcock, Jr. ....	Riverside
2600 Bancroft Way, Berkeley.	
Herbert Spencer Burden ....	Berkeley
2312 Derby St., Berkeley.	
George Merriman Burrall ....	Los Angeles
2625 Hearst Ave., Berkeley.	
Emily Beatrice Carrier, A.B. ....	Berkeley
2415 Bowditch St., Berkeley.	
St. Clair Garnett Cheney ....	San Francisco
33 Spruce St., San Francisco.	
Arthur Edward Dart ....	Berkeley
2500 Bancroft Way, Berkeley.	
Elizabeth Adelaide Davis, B.S. ....	Berkeley
2636 Channing Way, Berkeley.	
Stuart Toussaint Davison ....	San Francisco
1942 Bush St., San Francisco.	
John Harold Dorn ....	San Francisco
1369 Hyde St., San Francisco.	
Malcolm Shepherd Edgar, A.B. ....	Jamesburg, N. J.
3444 Washington St., San Francisco.	
Philips J. Edson ....	Los Angeles
2001 Allston Way, Berkeley.	
Norman Niesen Epstein ....	San Francisco
561 Waller St., San Francisco.	
Efner Dwight Farrington ....	Claremont
2605 Durant Ave., Berkeley.	
William Bernard Faulkner, Jr. ....	Stockton
3364 Twenty-first St., San Francisco.	
Southard Tolchard Flynn ....	Berkeley
1550 Oxford St., Berkeley.	
Harold Eugene Fraser ....	Oakland
843 Chestnut St., Oakland.	
Sidney Henry Gidoll ....	Stockton
2214 Union St., Berkeley.	
Mark Albert Glaser, A.B. ....	San Francisco
773 Pine St., San Francisco.	
George Oliver Gunderson ....	Oakland
497 Forty-eighth St., Oakland.	
Samuel Hanson ....	San Francisco
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*Medical School*

William Frederick Holcomb .....	San Diego
Fabiola Hospital, Oakland.	
Matthew Newell Hosmer .....	Turlock
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Lacy Gorin Hunter .....	San Francisco
1130 Haight St., San Francisco.	
Lorenzo Dow Inskeep, Jr. ....	Oakland
6449 Colby St., Oakland.	
Frank Warne Lee .....	Berkeley
1706 Walnut St., Berkeley.	
Mark D. Lessard .....	Alameda
1120 Grand St., Alameda.	
Donald Dyer Lum .....	Alameda
1200 San Antonio Ave., Alameda.	
George Richard McGee .....	Oakland
6449 Colby St., Oakland.	
Allen Kier McGrath .....	Berkeley
1811 Berkeley Way, Berkeley.	
Roger Bain McKenzie .....	Santa Monica
2647 Dwight Way, Berkeley.	
William Arthur Martin .....	San Francisco
870 Fell St., San Francisco.	
Joseph Minton Meherin .....	San Francisco
307 Scott St., San Francisco.	
Merrill Coleman Mensor .....	San Francisco
2119 Addison St., Berkeley.	
Stanley Herman Mentzer .....	San Francisco
4428 Twenty-third St., San Francisco.	
Richard Egerer Molony .....	Los Angeles
2647 Durant Ave., Berkeley.	
Richard Gill Montgomery .....	Portland, Oregon
2713 Haste St., Berkeley.	
Lewis Francis Morrison .....	San Francisco
760 Thirty-fifth Ave., San Francisco.	
Gerville Mott .....	Oakland
276 Lee St., Oakland.	
Guido Frederick Norman .....	Eureka
2600 Hilgard Ave., Berkeley.	
John Andreas Ness, LL.B. ....	San Francisco
1000 Hyde St., San Francisco.	
George Francis Oviedo .....	San Francisco
132 Appleton Ave., San Francisco.	
Louis Jerome Oviedo .....	San Francisco
132 Appleton Ave., San Francisco.	
Felix Pearl .....	San Francisco
241 Eleventh Ave., San Francisco.	

Dohrmann Kaspar Pischel, A.B. ....	San Francisco
2600 Etna St., Berkeley.	
Karl Francis Pelkan .....	San Francisco
1509 Arch St., Berkeley.	
Benjamin Harrison Pratt .....	Berkeley
2606 Bancroft Way, Berkeley.	
Victor Strong Randolph, A.B. ....	Berkeley
2701 Hearst Ave., Berkeley.	
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649 Kearny St., San Francisco.	
Herbert H. Schultz .....	San Francisco
523 Ninth Ave., San Francisco.	
Harold Raymond Schwalenberg .....	Sacramento
1711 Euclid Ave., Berkeley.	
Stuart Phillips Seaton .....	Berkeley
1341 Peralta Ave., Berkeley.	
Cyril Winfred Shier .....	Pasadena
2415 Haste St., Berkeley.	
Charles Joseph Simon .....	San Francisco
1375 Page St., San Francisco.	
Ralph Soto-Hall .....	San Francisco
2500 Bancroft Way, Berkeley.	
Helen Ward Spencer .....	Berkeley
1700 Euclid Ave., Berkeley.	
Jack Lorenz Stein .....	Berkeley
1502 Walnut St., Berkeley.	
Frances Ansley Torrey .....	Berkeley
2523 Ridge road, Berkeley.	
Parker Davies Trask, A.B. ....	Oakland
1502 Alice St., Oakland.	
Agnes Dolores Ward .....	Berkeley
2702 Fulton St., Berkeley.	
George Ray Upton .....	Modesto
Merritt Hospital, Oakland.	
Francis P. Wisner .....	Berkeley
1613 Bonita Ave., Berkeley.	
Morrell E. Vecki .....	San Francisco
2625 Hearst Ave., Berkeley.	



## **GRADUATES**





GRADUATES

1864

D'Amour, Ferdinand  
Davie, Jr., J. C.  
\*DuBois, A. L.  
\*Handy, J. C.  
Pond, W. B.  
\*Stivers, C. A.  
\*Weeks, F. L.  
Welch, W. P.

1865

Drinkhouse, E. J.  
Fahn, C. M.  
Gros, Edward  
Taylor, Edward R.

1866

Barber, Edward T.  
\*Brierly, Conant B.  
Fine, Andrew  
Heavitt, Granville  
Lingo, Marin B.  
\*Plummer, Richard H.  
\*Prevost, J. Renny  
Richardson, J. A.  
\*Rupe, Samuel H.

1867

Cairns, John  
\*Hackett, John  
Hansen, Thomas C.  
\*O'Neill, A. A.  
\*Robinson, Luke  
Shelton, Thomas W.  
Steely, John  
\*Widney, J. P.

1868

Bates, Charles B.  
\*Cameron, James S.  
\*Corbett, S. J.  
\*McGuire, Lucius  
\*Newmark, Valentine  
Waltz, G.

1869

Caldwell, Robert  
\*Clark, J. S.

\* Deceased.

Cochran, W. A.  
Haile, C. S.  
\*Toland, Charles A.  
\*Tuttle, H. P.  
\*Turner, J. T.  
Webber, J. C.  
\*Younger, Alex. J.

1870

Briggs, M. W.  
Mackenzie, J. H.  
Rucker, H. N.  
Sage, C. T.  
Seawell, John L.

1871

Churchill, Leonard  
\*Hampton, James E.  
\*Kirkpatrick, C. A.

1872

Keane, George B.  
Kurtz, Joseph  
\*Lyford, L. Dexter

1873

\*Anderson, J. A.  
\*Cox, Thomas H.  
\*Martineau, E. D.  
Mays, William H.  
\*O'Neill, J. C.  
\*Schnabel, Martin  
\*Whittell, A. P.

1874

Biggs, Frederick P.  
\*Blake, James W.  
\*Delmont, Francois  
\*Hicks, Young E.  
\*McDermott, William P.  
McLean, Robert A.  
Miller, Charles F.  
Nottage, George E.  
\*Waters, John W.

1875

Agnew, William P.  
Allen, Edward O.

- \*Benedict, C. W.
- Calbreath, John F.
- Callaghan, D. T.
- Davidson, Joseph R.
- \*Dawson, Alson
- Harris, Thomas W.
- Kosbue, A. Emil
- Mason, Benjamin F.
- Miller, John A.
- Scheelhaus, E. J.
- \*Simon, Jules A.
- Smith, William P.
- Swann, Charles M.

1876

- \*Blake, Charles M.
- \*Braman, J. J.
- Brown, George J.
- \*Chaigneau, V. A.
- \*Connolly, John J.
- \*Hodgdon, W. H. A.
- \*Hook, Walter E.
- Kirkwood, J. W.
- \*Lindenberg, W. H.
- McCormack, H. F.
- Minor, John F.
- Pope, Horace E.
- Powell, J. M.
- \*Quinlin, Albert P.
- Rorke, James
- Seawell, Thomas W.
- Sichel, Gust. W.
- Smith, T. H.
- \*Summers, G. M.
- Wanzer, L. M. F.

1877

- \*Duncan, S. C.
- \*Frost, James
- \*Heinimann, J. M.
- Joshephi, Simon E.
- McColl, G. F.
- McDonald, J. J.
- \*Pescia, Joseph
- \*Reich, George A.
- \*Reynolds, George E.
- Stephenson, B. E.
- Swisher, J. R.
- Von Buelow, F.
- Weiss, E. M.
- Wheaton, S. P.
- Williamson, W. T.

\* Deceased.

1878

- Bradbury, George F.
- Bruns, William C.
- Curran, Mary K.
- \*Guillemard, A. J.
- \*Lewitt, Frank A.
- \*McLaughlin, M. A.
- Osler, Charles
- \*Pruett, J. A.
- Seavey, L. T.
- Shuey, Sarah I.
- Summers, John F.

1879

- Addington, D. M.
- \*Downs, George W.
- \*Foote, Gilbert
- \*Gale, Herbert A.
- Harmon, Roberdeau
- \*Howell, H. H.
- \*Hughes, Lewis J.
- Johnstone, Arthur.
- Scott, Arthur W.
- Smith, George S.
- Sparks, Agnes
- Voight, W. C.
- Younger, Edward A.

1880

- \*Bettelheim, A. F.
- \*Caldwell, H. H.
- \*Foulkes, J. F.
- Hopkins, T. P.
- Laidlaw, Horace
- Lord, Franklin F.
- \*Meyers, Robert C.
- Mueller, H. E.
- Pond, Henry M.
- Robertson, John W.
- Sobey, L. A.

1881

- Bates, Walter E.
- Beardsley, E. M.
- Clinton, Charles A.
- \*Dean, Andrew J.
- DePuy, Anson A.
- Evans, C. W.
- \*LeFevre, J. P.
- Gillham, G. W.
- \*Grattan, E. L.
- Merritt, Emma L. Sutro

Morgan, F. E.  
Olds, William H.  
Sawyer, H. C.  
\*Sellon, Anna F.  
Sheets, John H.  
\*Young, Junius D.

1882

Beaumeister, Benjamin H.  
Bromly, R. Innis  
\*Buchard, L. S.  
Matthewson, J. M.  
Merritt, George Washington  
\*Moody, Mary W. F.  
\*Muentner, Henry  
Patterson, T. J.  
Payne, Joseph Richey  
Pressley, John B.  
Reardon, Thomas B.  
\*Senter, E. S.  
\*Stanton, James  
\*Stewart, J. M.  
Tarter, Albert P.

1883

\*Bordé, Henry J.  
\*Hughes, Jerome A.  
Lonigo, Emile V.  
Lovett, William B.  
\*Lundborg, Gustaf W.  
Mervy, Emile C.  
Patton, Charles J.  
Reed, Clarence E.  
\*Riley, Jahial S.  
Urban, Kurt  
\*Wickman, William J.

1884

\*Anderson, Winslow  
\*Beede, William M. S.  
Buckley, Vincent P.  
Clark, William D.  
Connolly, Thomas E.  
D'Ancona, Arnold A.  
Day, John G.  
Dodge, Henry Washington  
\*Enright, Chas. M.  
Gates, Frank H.  
\*McCoy, Juan W.  
Nuttall, George H. F.  
Partsch, Herman  
Scholl, Albert L.  
\*Sherman, Elenora S.

1885

Armistead, Howell V.  
Baldwin, Robert O.  
\*Collins, Addison C.  
Gallwey, John  
Howard, Katherine I.  
Lustig, Daniel D.  
Nichols, Theodore A.  
\*Perrault, Edward L.  
\*Wilcox, Wilbur J.  
Williamson, John M.  
\*Winton, Henry M.  
Woods, W. E. Josephine  
\*Wooster, David

1886

Brown, Ernest L.  
\*Chalmers, William P.  
Conlan, William E.  
Kingsley, Thomas H.  
\*Plant, Benjamin A.  
Soboslay, Julius  
Wilson, Kemlo R. McD.

1887

Cluness, Wm. R., Jr.  
Cook, Frank S.  
Fottrell, Michael J.  
Glaze, George I.  
Howard, William B.  
Kirchhoffer, Frederick  
Koboyashi, Sankio  
Mays, Arthur H.  
\*McLean, John T.  
Morrill, Augustus L.  
\*Park, Theorilda C.  
\*Reardon, William E.  
Shannon, James  
Tevis, Henry L.  
Watanabe, Tey  
Williams, Robert B.

1888

Alexander, Monrove E.  
Barbat, John H.  
Cox, Rosamond L.  
\*Dennis, Nathan P.  
\*Dunn, James P. H.  
\*Estes, Melvin B.  
Frick, Euclid B.  
Happersberger, Albert K.  
Kelly, John L.  
Noble, John A.  
White, James T.

1889

- \*Bunker, Robert E.
- \*Foreman, Francesca I.
- Gleaves, Christopher C.
- Greene, Frances R. Marx
- Haskin, William H.
- Holmes, Edward R.
- Jones, Ottowell W.
- Kawakami, Nasayasu
- Mather, Squire R.
- Mayer, Oscar J.
- O'Brien, Aloysius P.
- Oliver, Joseph A.
- Tuggle, Samuel P.
- Wade, Mark S.
- \*Zeyn, Gustav C.

1890

- Bond, Frederick T.
- \*Felt, Rae
- Hawkins, William J.
- Hunkin, Samuel J.
- \*Kugeler, Henry B. A.
- Mann, Chas. S.
- \*Martinez, John M.
- Meyer, Albert G.
- Mohun, Charles C.
- Montgomery, Charlotte B. S.
- Scholl, Albert J.
- Surryhne, Benjamin F.
- Thrasher, Marion

1891

- Baker, Henry Anthony
- Blake, Charles Robert
- Burnham, Clark James
- Collischonn, Philip
- Driscoll, Edward Paul
- Dunbar, Arthur White
- Ford, Campbell
- \*Kirby, William Thomas
- Lagan, Edward
- Macdonald, John Munroe
- McMurdo, John R.
- \*Milton, Joseph Leo
- Molony, James John
- Morse, Fred Wellington
- Olsen, Marie Colditz
- \*Oviedo, Louis Perfecto
- Petrie, Frank Branson
- \*Sims, John Marion
- Smith, Weston Olin
- Warner, James Kyle
- Wayson, James Thomas

\* Deceased.

1892

- Caglieri, Guido E.
- Crook, Emma E.
- D'Ancona, Lillie Bussenius Schram
- \*Fraser, S. J.
- Johnstone, Ernest Kinlock
- Lowe, Frederick William
- \*McCone, James F.
- Nelson, John A.
- Ogden, George W.
- Rathbone, William T.
- Sanborn, Franklin H.
- Sutherland, Robert L.
- Terry, Wallace Irving
- Von Adelung, Edward, Jr.

1893

- Aird, John W.
- Berndt, Richard M. H.
- Cadwallader, Rawlins
- Conrad, David Andrew
- Cothran, Abraham L.
- Falck, Millicent E.
- Fleming, Bartholomew Francis
- Flesher, Frederick Charles G.
- Freeman, Ernest Maynard
- Gall, Alexander Marshall
- Glover, Cosmos Andrew
- Horton, Edward Shelton
- Hulse, Clarence H.
- \*Lagan, Hugh
- Maguire, Charles S.
- McCarthy, Charles D.
- Phelan, Henry duR.
- \*Pond, Gardner Perry
- Rantz, Stephen H.
- Sanborn, William K.
- Schrader, Sydney H.
- Simon, Grace

1894

- Booth, John R.
- Bunnell, Edwin
- Clark, George Waverly
- Cleary, Stephen
- Crees, Robert
- De Puy, Edward Spence
- Dickerson, Clarence Fitzhugh
- Fitzgibbon, Frank Timothy
- Freeman, Charles Henry
- Greth, August
- Hill, Edward John
- Holmes, Thomas Blakeman

Leland, Thomas B. W.  
 MacInnis, Martin B.  
 McCullough, Frank E.  
 McKnight, Helen M.  
 Morrisey, Joseph Grant  
 Morrison, Mary E.  
 Pawlicki, Casimir F.  
 \*Reith, Fenelon M.  
 Root, Corydon B.  
 Ryfkogel, Henry A. L.  
 Selling, Natalie  
 Sharp, James Graham  
 \*Sime, Neli A.  
 Smith, Harvey F.  
 Stirewalt, Henry W.  
 Thompson, James Goodwin  
 Tiffany, Edward V.  
 Wilkes, Farrington  
 Wright, Henry E.

1895

Bacigalupi, Louis D.  
 Badilla, Jose Crisanto  
 \*Barbat, William Benjamin Frank-  
 lin  
 Boyes, William J. R.  
 Browne, Augustus Frank  
 Dudley, Frank W.  
 Easton, Daniel E. F.  
 \*Emerson, Horatio B.  
 \*Flood, John J.  
 \*Gray, Robert F.  
 \*Hav, William G.  
 \*Heller, Clarence Louis  
 Helms, George L.  
 Hopkins, Edward Kimball  
 Hull, James P.  
 Hyde, George E.  
 Lartigan, August L. J.  
 \*Lutz, Frederick A.  
 MacCallum, Hammond J.  
 \*McCulloch, Thomas A.  
 Nast, John Ernest  
 Philips, Adelina M. Feder  
 Rinne, Frederick A.  
 Sankey, Mary J.  
 Schmelz, Charles J.  
 Sharp, Rose Eppinger  
 Stone, Bertram  
 \*Trafton, William Augustus  
 Villain, Albert J.

1896

Allen, Clifford Emmet  
 Anderson, Helen O.  
 \*Armistead, Cecil M.  
 Bancroft, Eleanor May Stow  
 Beck, Henry Martin  
 Blum, Sanford  
 Botsford, Mary Elizabeth  
 Broughton, George Anthony  
 Burnham, William P.  
 Cameron, Howard McD.  
 Chace, William D'Arcy  
 \*Coe, Leonard Hayes  
 Cox, Thomas F.  
 Giannini, Attilio H.  
 Harrigan, Joseph T.  
 Katsuki, Ichitaro  
 Kellogg, Wilfred Harvey  
 \*Kearney, James Frederick  
 \*Lee, Arthur S.  
 Maloon, Clarence LaFayette  
 McGettigan, Charles D.  
 \*McLaughlin, Alfred  
 Maher, Thomas D.  
 Morgan, Charles L.  
 Morrow, Howard  
 Murphy, James Daniel  
 Muscot, Brayton  
 Newman, Alfred  
 Noble, Mary L.  
 O'Brien, John Henry  
 O'Brien, John Thomas  
 Oldenbourg, Louise Augusta  
 \*O'Malley, William Henry J.  
 Orr, Robert H.  
 \*Painter, George Louis  
 \*Parkman, Wallace Ernest  
 Putnam, Victor E.  
 \*Rochex, Joseph  
 Ryer, Marshall B.  
 Scott, Florence  
 \*Stafford, John T.  
 Stern, Arthur A.  
 Stewart, Mary J.  
 Stone, Mack V.  
 Stover, William M.  
 Thompson, Grace Feder  
 Thorpe, Lewis Sanborn  
 \*Trask, Henry Caustin  
 Trevino, Alberto  
 Waller, Newton B.

\* Deceased.

## 1897

Borchers, Bertha  
Curl, Holton C.  
Dunn, William Lawrence  
Hickey, Thomas A.  
\*Huntington, Samuel D.  
\*McMahon, Frank A.  
\*McLean, Murdoch

## 1898

Abraham, Henry  
Bartlett, Cosan Julian  
Bell, William Lisle  
Boalt, Grace S. Linforth  
Bruguiere, Pedar Sather  
Callaway, Edwin  
Crowley, Thomas J.  
Dufficy, George Woodward  
Fine, Henry M.  
Giroux, Edward David  
Hill, Howard Stephen  
Judell, Malvina I.  
Keenan, Alexander Stanislaus  
Lucchetti, Victor F.  
Menefee, Joseph S.  
Muller, Frederick C.  
Roche, Thomas B.  
Tillman, Frank J.  
Tobriner, Oscar D.  
Trew, Neil C.

## 1899

Arthur, Samuel Richard  
Ash, Rachel Leona  
Clark, Thomas James  
Colliver, John Adams  
Dinkelspiel, Edgar Meyer  
Ebright, George Elliot  
Emerson, Mark Lewis  
Franklin, Milton Washington  
Frick, Donald Jackson  
Gardner, Samuel James  
Gillihan, Allen Francis  
Graham, Harrington Bidwell  
Henesey, Walter Joseph  
Lanz, Paul Ruhnke  
Legge, Robert Thomas  
\*Millar, Charles Forester  
McElroy, Bernard Francis  
Onesti, Silvio Joseph  
Pope, Emma Wightman  
Pope, Saxton Temple

\* Deceased.

Rice, Edward James  
Stevens, William Emerson  
Stevenson, George Lawrence  
Taylor, James Edward  
\*Taylor, Oscar Nettleton  
Volkhardt, Vida Redington  
Weyer, Gustavus Adolphus  
Willard, William Patten

## 1900

Alderson, Harry Everett  
Bacigalupi, David Eugene  
Dorn, Dora Ida  
Doychert, Ernestine  
Farrow, Edgar James  
Fernandez, Manuel  
Fischer, Elizabeth F. J.  
Harvey, William P.  
Irones, Rutherford Buchard  
Klotz, Bernard John  
Langdon, Samuel Walter Ross  
Larson, Julia Paulina  
Laughlin, Clyde Briggs  
Maguire, Thomas Michael  
McChesney, George Jewett  
McIntosh, Arthur Merrill  
\*Miyabe, Tadataro  
Moore, William George  
Nolan, Mary Elizabeth  
Osprig, Peter  
Pratt, Matthew Dennis  
\*Reinhardt, George Frederick  
\*Russ, Raymond John  
Saph, Louis Victor  
Simpson, Frank William  
Sullivan, John Francis  
Sweeney, George Joseph  
\*Vassault, Theodora Elliott  
Watts, Herbert Charles  
Wemple, Emmet LeRoy, Jr.  
Wilder, Edwin Milton

## 1901

Arthur, Edgar Allen  
Beerman, Wilfred Fenton  
Dickie, Walter Murray  
Dresser, Ralph Orlando  
Foree, John Nivison  
Hill, Florence McCoy  
Hill, Harold Phillips  
Hill, Reuben Chandler  
Kavanaugh, Mary Frances

Lennon, Milton Byrne  
 Leonard, John Vaughan  
 Lindsay, William Kinkade  
 Madsen, Rasmus Hausen  
 Lartigau, Kate Isabel Brady  
 Morong, Frederick Lincoln  
 \*Murphy, William James  
 Purlenky, George Philip  
 Sanborn, Fletcher Greene  
 Schmitt, Lionel Samuel  
 Seawell, James Walter  
 Simmons, Haydn Mozart  
 Smythe, Hudson  
 Sweetser, George William  
 Thomas, Benjamin  
 Toner, Joseph Michael  
 \*White, John Lysander  
 Woolsey, Chester Howard  
 Yanagisawa, Una Yone

1902

Bakewell, Benjamin  
 Baumgarten, William  
 Bill, Philip August  
 Buckley, Emma  
 Chilson, William Charles  
 Culver, Blanche C. Van Heusen  
 Deininger Marguerite  
 \*Fanning, Henry David  
 Foster, Ernest Charles  
 Gleason, Charles Raymond D.  
 Henderson, Frank Revere  
 Juilly, George Hippolyte  
 Kucich, Ostroilo Stanislaus  
 Lee, Adelbert Watts  
 Leimbach, John Herbert  
 Lendrum, Birney Alexander  
 Lensman, Arthur Pascal  
 Majors, Ergo Alexander  
 Mallery, John Harry  
 McGinty, Arthur Thomas  
 Meagher, Joseph Frederick  
 Merwin, Caroline Stow  
 Moulton, Dan Hazen  
 Newton, John Crockett  
 O'Donnell, Joseph Martin  
 Piper, Harry Elwin  
 Powers, George Herman  
 Pressley, James Fowler  
 Putnam, Frank L.  
 Quinn, Thomas D'Arcy McGee  
 Tebbe, Frederick Henry  
 Thompson, Lewis Lee

Topham, Edward  
 \*Walsh, William John  
 Williams, Walter Joseph M.  
 Zumwalt, Frederick H.

1903

Baer, Adolph  
 Bibor, Paul Edward  
 Bine, Renè  
 Breitstein, Louis Isidor  
 Culver, George DeWitt  
 Duggan, Henrietta Hagan  
 Ellis, James Alexander  
 Girard, Frank Robert  
 Hamilton, James Kiah  
 Hill, Howard Gilman  
 Hurley, James Raymond  
 Johns, Madeline  
 Kavanagh, Joseph James  
 Lissner, Henry H.  
 Longabaugh, Rudolph Ignatius  
 McGuire, William Garrett  
 McKinnon, Aloysius John  
 McKown, Charles Lemon  
 McNab, Thomas Reid  
 Miner, Mark Leonard  
 Olcovich, Viola Ruth  
 Reynolds, Robert G.  
 Roberts, Harry Philip  
 Rosenberg, Caroline  
 Rutherford, Walter Scott  
 Stone, Earle Almeron  
 Stafford, David Emmet  
 West, Sydney Vattel  
 Wills, Clarence Alfred  
 Winslow, Josephine E. Barbat

1904

Baker, Morgan Dillon, Jr.  
 \*Baum, Maurice Lowell  
 Baumeister, Edward Emery  
 Brown, David William  
 Brownsill, Edith Sara  
 Castlebun, Paul  
 Chain, John Nolan  
 Ewing, David Albert  
 Foshay, Arthur Wellesley  
 \*Harker, George Asa  
 Hart, Morton Edwin  
 Hector, Louise A. Linscott  
 Hector, Robert, Jr.  
 Hoag, Foster Melaneton  
 Jacobs, Louis Clive  
 Kofoid, Henning

\* Deceased.



McClish, Clarke Loring  
 Mix, Pernier Albert  
 Nicholls, Robert Julian  
 Peoples, Stuart Zeno  
 Sandholdt, John Peter  
 Schwarz, Jacob  
 Slavich, John Francis  
 Smith, Eugene Kneeland  
 Van Tassell, Fred Hugh  
 Waldeyer, Wilhelm  
 Warren, Henry Claud  
 Webster, Hannah Ellen

## 1905

Albee, George Cummings  
 Alexander, Edgar William  
 Bigelow, Coniah Leigh  
 Blair, James Clark  
 Bricca, Constantine Raphael  
 Briggs, George Abiel  
 Cothran, William Franklin  
 Cowden, Ambrose Franklin  
 DeHaven, Mary Tom  
 Harker, Harriette Buttler  
 Hoffman, Herman Verplanck  
 Kenny, William  
 Peck, John William  
 Reeve, Oscar Charles  
 Ryan, Louis Xavier  
 Snyder, George Samuel  
 Turner, Eldridge Curtis  
 Vickerson, John Irving

## 1906

\*Adler, Alexander  
 Brasier, Olive Violet  
 dal Piaz, Antonio Menotti  
 Dannenbaum, Sydney Roy  
 Doran, Alexander Vincent  
 Eidenmuller, William Cooper, Jr.  
 Franklin, John Henry  
 Hardy, Samuel Percy  
 Hays, Wilfred Bertram  
 Hunter, George Graham  
 Igo, Louise Mary  
 Jones, Charles Breckenfield  
 Kronenberg, Herman  
 Mahan, David Joseph  
 Ochsner, Richard Leon  
 Stone, Waid James  
 Temple, Jackson

Wrenn, Joseph Thomas  
 Zumwalt, Reuben Sylvester

## 1907

Alexander, Archie Addison  
 Allen, Frederick Madison  
 Bingaman, Elmer Wiley  
 Bixby, Wilfred Everett  
 Clark, John Aloysius  
 \*Craig, Lloyd Alexander  
 Dawson, William Calhoun  
 Devine, Cornelius Thomas  
 Dodds, Thomas Garfield  
 Gutzwiller, Anna Maria  
 Howell, Walter Orrin  
 Johnston, James Harvey  
 Ostrom, Earl Emmet  
 Pareni Meads, Romilda  
 Pauson, Charles Arthur  
 Peterson, Edward August  
 Proctor, Mehitabel Clara  
 Schulze, Otto Theodore  
 Sobey, Gifford Lyne  
 Stansbury, Middleton Pemberton  
 Stoddard, Thomas Albion  
 Sylvester, Florence Mabel  
 Telfer, Gavin James  
 Walcott, Allen Moore

## 1908

Beebe, Lela June  
 Briggs, LeRoy Hewitt  
 Bunnell, Alexander Sterling  
 Cartwright, Sanford Warren  
 Foster, Harry Emerson  
 Frates, Frank Edward  
 Howe, Louis Philippe  
 Jacobs, Samuel Nicholas  
 Jee, Shin Five Pond Moorar  
 Johnson, Hans Coford  
 Lewitt, Frederick Clinton  
 Mansfield, Thomas Drummond  
 Meads, Albert Manson  
 Newman, Lester  
 Powell, Alvin  
 Sutherland, Robert Thomas

## 1909

Cohn, Herbert Jacob  
 McVey, Charles Leland  
 Meyers, Wallace Longfellow

\* Deceased.

Naffziger, Howard Christian  
White, Margaret

1910

Hooker, Marion Osgood  
Irwin, Wilbur Henry  
Long, Seely Frederick, Jr.  
Moore, Chester Biven

1911

Baldwin, Walter Isaac  
Best, Eldridge John  
Bryan, Lloyd  
Campbell, William Howard  
Gompertz, Kate Rawlinson  
Markel, Howard Hill

1912

Bailey, Samuel Ellsworth  
Bush, Henry Chesley  
Cleary, Ernest Winton  
Dozier, Linwood  
Hoag, Carl Leslie  
Kelly, Frank Lewis  
Long, Herbert Everett  
Powell, Dewey Robert  
Prince, Lionel David  
Stadtmuller, Ellen Smith  
Sweet, Clifford Daniel

1913

Allen, Warren Barrett  
Aller, Daniel Irwin  
Catton, Joseph Henry  
Cornell, Earl Hamilton  
Harvey, Richard Warren  
Marks, Selby Harold  
Risdon Storer, Ruth Charlotte  
Tranter, Charles Lee

1914

Abbott, Roy Charles  
Barney, Edna Locke  
Baxter, Frank Stanley  
Berkley, Hugh Kling  
Bull, Edward Cline  
Cunningham, Ruby Lacy  
Ehlers, Henry  
Lewis, Elizabeth Grace

Pierce, George Warren  
Rowe, Albert Holmes  
Seatena, Fred Nicholas

1915

Betts, Irvin H.  
Clapp, Gordon Adams  
Epsteen, Abelson  
Friedman, Aaron  
Gelston, Clain Fanning  
Holzberg, Henry Leopold  
Kretsinger, George Arneke  
Kruse, Fred Herman  
Maxwell, Alice Freeland  
Rehfisch, John Morse  
Seaver, Homer Carlton  
Wells, Clarence Edgar  
Woolsey, John Homer

1916

Arrington, Mabel Florence  
Baillie, Elizabeth Worley  
Chamberlain, William Edward  
Charvoz, Elton Ralph  
Cook, Enos Paul  
Corey, Dunnleigh  
Craig, Mary  
Davis, Brython Parry  
Dunn, Thomas Balfour Mackie  
Goss, Orville Roscoe  
Hare, Herold Pittman  
Holliger, Charles Daniel  
Horner, Warren Douglas  
Jones, Maurice  
Linde, Frederick George  
Mathé, Charles Pierre Louis  
Morris, Laird Monterey  
Morris, Myrl  
Newell, Robert Reid  
Owen, Joseph Allen, Jr.  
Pinger, Frank William  
Pritchard, Jacob Leroy  
Ruddock, John Carroll  
Schulze, Margaret  
Searls, Henry Hunt  
Sherman, Julius  
Sherman, Robert Stanton  
Thompson, William Ben  
Williamson, Marshall Gould

## 1917

†Brendel, Frank Philip	McCoy, Horace Hoagland
Calvi, Pini Joseph	*Mehlmann, Emma
Cohn, Allan Largess	†Miller, Hiram Edgar
†Cohn, Mendel Leopold	†Muller, Vinton Adolf
Cook, Orrin Simeon	Penland, Hugh Elmer
†Craig, Charles Alfred	Pennington, Alma Stevens
Fay, Jewel	Schulze, Elizabeth
†Fleming, Howard Webster	Seligman, Lewis
Frey, William Christensen	†Shufelt, Alson Anderson
Harvey, James Ernest	†Sooy, Daniel Warren
Heaney, Robert Harold	†Washburn, William Wallace
Hirschfeld, Mervyn Heller	Williams, John Chilton
Hollingsworth, Merrill Windsor	†Zumwalt, Elmo Russell

## 1918

The degree of M.D. was not conferred Commencement, 1918, on account of the transition from the four-year to the five-year curriculum. Charles B. Bennett received the degree M.D. December 10, 1918.

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\* Deceased.

† In U. S. military service.









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